NEW GENESEE FARMER,

AND GARDENER'S JOURNAL.

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HENRY COLMAN, EDITOR.

TERMS.—One dollar per annum—Six copies for $5—Thirteen copies for $10. On all over Twenty copies, a discount of thirty per cent will be made. Bills of all specie paying banks will be taken at par, *if sent free of postage.*

The postage on this paper is only *one cent* to any place within the State, and *one and a half cent* to any part of the United States.

Postmasters are permitted by law to remit money free of postage. The friends of agriculture are respectfully requested to assist in obtaining subscribers. Back numbers and volumes can be furnished.

Communications on business or for the paper, may be addressed to CROSMAN & SHEPARD, Rochester, N. Y.

To the Friends of Agriculture in the United States.

We commence with this number, a new volume of the New Genesee Farmer, and we respectfully ask the patronage of our friends. We present it likewise, much improved in its typographical execution, and the quality and size of the paper. We do not pretend that these outward matters are of much importance compared with what is within; or that, in meeting a friend, we are to allow his dress to weigh any thing in comparison with his character. But then, we have always found that these external habiliments are not of small consideration, and affect even the calmest and most philosophical minds.

We have more than once imagined that a congregation heard with much more patience a poor sermon, when they were sitting in a well warmed and well lighted church, in convenient and well cushioned pews, with elbow and arm rests and foot-stools, than they would listen even to a good sermon in a cold, bleak barn of a church, with rattling doors and windows, and sitting upon rough plank benches without any backs to them. So, we believe, it is with a well-printed book or paper, compared with one that is poorly printed; and where, owing to the coarseness of the paper and the smallness and dulness of the type, it becomes difficult even for the youngest and the strongest eyes, to get through a page without uneasiness or pain.

There is another special reason in our case. Many, perhaps most of our readers, are working farmers, who, busily employed all day, find the evening the only favorable time for reading, but who are necessarily repelled from a paper where the ink is light and the type poor.

Thus much may suffice for the exterior. The contents, it is confidently hoped, will be more worthy of our readers than they have been; and that the paper will maintain a distinguished character for its intelligence and its practical utility. The Editor cannot promise to do any better while it remains under his charge, than he has done before, because this would imply that he has not done his best the year past. How far he has succeeded he does not pretend to say; but he cannot admit that he has not tried; yet it is confidently hoped, that by extending the correspondence of the paper, and opening new sources of information, its matter may be more diversified and improved. In any and all events, every effort will be made to render it as practical as possible; and that its readers may never be deluded with ingenious theories to the neglect of the sound and wholesome lessons of experience.

It will be our aim, likewise, to embrace a wider field of inquiry and discussion than that to which its pages have been confined. The current opinion is, that a farmer's paper should be exclusively agricultural in the most restricted sense of that term; and so they would have it confined to the mere cultivation of the soil, plowing, planting, sowing and harvesting, and the raising and keeping of live stock. It is our opinion, on the contrary, that it should embrace every thing connected with rural or country life, the cultivation of the soil, and all the common operations of husbandry, and likewise matters of rural education, rural pleasures, pursuits, residences and manners; the raising of live stock, technically so called, and also the raising of children, the education of plants and trees, and the higher education and training of these immortal minds, which, like the former, can only be made beautiful and fruitful by the most assiduous cultivation. Indeed, he would have it, could he do as he would with it, in the fullest and best sense of the term, a Family Paper, which will find a welcome in the parlor and in the kitchen; by its sage lessons of experience, interesting the old; by its useful suggestions and practical advice, arresting the attention of the busy, the active, and the laborious, and by its innocent gaiety charming the imagination of the young. We desire, above all things, to render the farmers' pursuits, the farmers' pleasures, and the farmers' home, as respectable, as comfortable, as independent, as happy, and as attractive as it can be rendered.

Our publishers promise, likewise, to improve its business department by extending its reports of markets in the principal parts of the country, as far as this matter concerns the farmers, and imparting, in respect to the production and sale of all agricultural produce, the most authentic information.

New Genesee Farmer and "True" Genesee Farmer.

When men find it necessary to introduce themselves by saying that they mean to be honest, the little knowledge we have had of human life and character, leads us always to suspect them; as, if a man should say, I am *now* going to speak the truth, you may infer with almost perfect certainty, that it is not his habit, and that for once he is going out of his way. Just so it is when men set about to vindicate their motives: in nine cases out of ten, you will have a right to conclude that their motives are the reverse of what they profess. An honest man will never go about to vindicate his motives, but will leave them to be judged of by his acts. There may be some exceptions to these remarks, but these exceptions are rare.

We have been led to these observations by the appearance of a Prospectus for the publication of the TRUE Genesee Farmer, a ricketty concern, which promises to make its appearance shortly in this city, under the editorial care of a travelled gentleman, whose former successes in this department are not altogether unknown to the citizens of Rochester; and *how* known, may be easily ascertained by turning over the pages of the Genesee Farmer, when Goodsell's Farmer entered into competition with that able journal. We call it a ricketty concern, because a similar erection, with at least one of the present principal supports, formerly tumbled down; and because, in this case, the enterprising publisher, in a city where he has lived for years, and was, formerly, as he admits, a partner in a similar concern, but, as he confesses, for reasons best known to himself, deserted the foundling and left it at another man's gate,—finds it necessary to get an array of names to certify to their belief of his ability to execute what he undertakes—gentlemen, of course, of great respectability, but not one of whom, we presume, feels himself bound, in this case, to the amount of a single sixpence!

Now we know that this is strong language. We have no objection to engaging with any of our neighbors, in a fair and honorable competition. We would not, in such case, lay a straw in their path. But all jockey tricks we despise; and when men attempt by stealth, by stratagem, or by falsehood, to cut us off, we cannot hesitate to speak of such conduct as it deserves. What else is the meaning of a new agricultural paper in this city, under the title of the True Genesee Farmer. This paper has been several years published as the New Genesee Farmer. Now, under these circumstances, to come out with another paper calling it the *True* one, implying theirs *is* the true one, (which is false,) and that ours is *not* the true one, (which is another falsehood,) sufficiently stamps the character of the men who are guilty of it. But here, it will be seen, is an attempt at a double deception; first by the misstatement or direct falsehood; and, second, by adopting a name so similar as the *True* Genesee Farmer and the *New* Genesee Farmer, to attempt to impose, from a similarity of sound or appearance, the former on a portion of the public for the latter. This is a meanness which we need not characterize. But there is another meanness, involving likewise a direct falsehood, to which we shall briefly allude.

In their Prospectus, they have seen fit to charge us with a disposition, in increasing the price of the Farmer, unnecessarily and unjustly to levy a contribution upon our subscribers. We trust we have not a subscriber who is not willing that we should be fairly paid for our labor; and we have not one but that we are determined he shall have the worth of his money.

It will be seen, from an exact statement of our case, that the price of the paper is not increased proportionately to its enlargement and its improved typographical execution. We ask a little more, and we give a great deal more; and we are anxious to make an agricultural paper, in manner and matter, worthy of the great agricultural community of Western New York. Besides, no considerate and just man can possibly think that 70 cents or one dollar a year, is a high price in any times for a large quarto paper, furnishing monthly sixteen pages of close reading matter, and printed in a manner easy to the eye and gratifying to the taste. But we will leave it to the public to determine whether they will pay 70 cents or a dollar for the regular receipt of a paper, in size and amount fully worth the money, or whether they will pay 37½ or 50 cents for another paper; and as has happened in some other cases, not altogether unknown to the same establishment, perhaps get —. The diplomacy, or in vulgar parlance, the "trickishness" of the concern, may be seen in another respect; that in their Prospectus, the terms and discount to agents are inserted in small type at the top, which they are requested "*to tear off*" *before the bill is put up.* If every thing is above board, what occasion for this concealment?

We foresee a difficulty against which we wish our friends to protect us. We beg them, therefore, to direct all their letters to the *New* Genesee Farmer. We have been continually in the habit of receiving letters directed to the Genesee Farmer, because unquestionably intended for us. The True Genesee Farmer being established here, it may be doubtful to whom such letters should be delivered. The Editor of the new paper may, possibly, in the course of his life, have heard of difficulties and misunderstandings, growing out of letters either misdirected or meeting on their way to their lawful owner with some other accident. We wish to guard against difficulties and misunderstandings of every sort with our neighbors. Had they come into the common field like men of honor, we should have bid them welcome as co-laborers. But when men attempt to cheat us out of our honest name, or if they dare not do it directly, attempt it by an indirection; when they come into the fleet with false colors; or when, like men in a crowd, they seek to thrust themselves forward by getting on other men's shoulders, though minds of a certain character may chuckle over such policy, such conduct, with honest men, admits of but one name; and to the verdict of such men we submit the case.

THE PUBLISHERS.

AGENTS WILL PLEASE NOTICE THIS.

As great complaints are made of the scarcity of money, the publishers of the New Genesee Farmer will issue a paper, half the size of this, for fifty cents a year, as soon as the first number of the opposition paper appears, or we will send our paper for six months to any person who will remit us fifty cents, leaving it optional with them on the first of July to continue or discontinue their subscription.

True Statement of the Case.

As some may think $1 a year too much in comparison with the price formerly charged for this paper, the present proprietors take this opportunity to say, that the "Farmer" was at first printed on an inferior quality of paper, and contained "16 large octavo pages, at fifty cents per year." Now it is printed on good paper, more than twice as large, at $1 a year, the difference in the cost of paper alone being as $2 50 is to $8—while the type setting is as $25 is to $63, and other expenses in proportion. Thus it is easily demonstrated, that instead of doubling the price from what was considered a fair compensation when the paper was first started, the proposed increase is barely sufficient to sustain it at its present size; and it may be further remarked, that if any of the former proprietors have for any purpose doubled the size of the paper without increasing the price, and have since abandoned the field, the intelligent farmers of the United States are not the men who wish those, who now occupy it, to labor without an adequate reward.

2316 E.

European Agricultural Tour and Survey.

Several gentlemen interested in the advancement of agricultural science and improvement, and of rural education, have proposed to Mr. Henry Colman, late Commissioner of Agricultural Survey of Massachusetts, to visit Europe for these objects. The plan is for him to spend a year in England, in the examination of the Husbandry and Rural Economy of that country; and a year on the continent, in the examination of French, Flemish, Swiss, and German Husbandry, and especially the Agricultural or Manual Labor Schools and the Experimental Farms.

It is thought that such an examination, as yet never undertaken by an American, might, if well conducted, essentially conduce to the advancement of agricultural knowledge and improvement in this country, and especially serve the cause of rural and practical education, which is now exciting great interest throughout the United States. The general plan of the survey will conform to Mr. Colman's Survey of the Agriculture of Massachusetts.

It is proposed to publish his reports in successive numbers. The first number is expected to appear by the first of January, 1844, and sooner if practicable. The rest of the numbers will follow in convenient succession, at intervals of two or three months.

The whole work will be comprised in eight, or at most ten, numbers, of at least 100 pages each, handsomely printed in an octavo form, stitched and covered, and embellished with necessary and useful drawings and engravings, title pages, and index.

The cost will be 50 cents each number to subscribers. Gentlemen who subscribe, are understood as subscribing for the whole work.

As the enterprise involves of necessity a large expense, it is expected that one dollar per copy will be paid on subscribing; or, otherwise, one dollar on the delivery of the first number; one on the delivery of the second number; one on the delivery of the fifth number; one on the delivery of the seventh number; and one on the delivery of the ninth number, should the work be extended to ten numbers.

Mr. Colman will leave for Europe as soon as the subscription will warrant the undertaking.

An early return is respectfully requested of gentlemen to whom this is sent, addressed to Henry Colman, Rochester, N. Y.; to Little & Brown, Boston, Mass.; or to Luther Tucker, Cultivator Office, Albany, N. Y.

It will be seen from the above advertisement, that the subscriber contemplates a tour in Europe for agricultural inquiry and observation. This enterprise has been commenced under the encouragement of some of the most distinguished friends and advocates of agricultural improvement in the country; and with a strong conviction on his own part, after giving to it the most mature consideration, that in no manner could he, in his humble sphere, render so essential a service to the great cause which he has so long had at heart, the cause of an improved husbandry, and the enlargement of the comforts and the elevation of the character and condition of the rural classes.

He has had the greatest satisfaction in finding so cheerful and liberal a co-operation in his enterprise, not merely of personal friends, but of gentlemen in various parts of the country, upon whose kindness he had no claim, from an avowed conviction of the great utility of the undertaking if it can be well executed. The Massachusetts Society for promoting agriculture, with that signal liberality and intelligence by which their measures have always been directed, have subscribed for one hundred copies of the Reports, intending them for distribution in agricultural premiums, or otherwise. The Worcester County Agricultural Society of Massachusetts, which may justly claim the character of a pattern society in its zeal and the practical wisdom of its measures for agricultural improvement, have appropriated two hundred dollars from its funds for the same object. The Essex County Agricultural Society, Mass., have, as in the former case, distinctly and emphatically approved the object by their resolutions, and added the more substantial encouragement of a subscription for twenty-five copies, with the expression of their regret that, on account of recent drafts upon their funds, they were unable to do more. The Berkshire Agricultural Society in Massachusetts, at an informal meeting of the Board of Trustees, have likewise pledged their liberal co-operation, which will be confirmed at their regular meeting. The Ontario Agricultural Society, N. Y., besides passing resolutions highly commendatory of the project, have followed in the footsteps of the Worcester Agricultural Society. These are all the agricultural societies in the country before which the subject has, as yet, been brought.

A single public spirited individual in the county of Seneca, Judge Sackett, has made himself personally responsible for one hundred copies of the Reports, for that society and county. Another individual, near Boston, whose patronage of every good enterprise is well known, and whom Heaven seems to have blessed with wealth only that he might do good with it, has made a subscription for one hundred copies. Another individual, equally distinguished through a long life for his public spirit, has subscribed for fifty copies. Thirteen individuals have subscribed for twenty-five copies each; five, for ten each; and many for five and lesser numbers. Indeed, the subscription has scarcely been presented to an individual who has refused his aid, or hesitated as to the utility of the project; and embraces many of the best names in the country.

The subscriber would do great injustice to his own grateful feelings, if he did not acknowledge in these subscriptions, much of personal kindness and confidence, testimonials of regard and good will which he cannot too highly estimate; but, at the same time, he is equally happy in knowing that nothing of this sort would have been done, were not the object itself of acknowledged public utility.

It may be said that English or European agriculture cannot be adapted to our condition. A difference in climate, in soil, in the price of or facility of procuring labor, and in various circumstances which are obvious, must, of course, materially affect the agriculture of each country; but, at the same time, there must be much that is general, which is equally applicable to both. In countries where the agricultural art has been carried to so great a degree of perfection as in England and some parts of the continent, there must be a great deal to be learned, which cannot fail to be highly instructive and useful. If it be said that this can be learned from books, we can only reply that it is books upon this subject, which we design to put into the hands of our farmers; and with this difference: The accounts we have had of foreign agriculture have been, in most instances, from foreigners themselves. In such cases, it is to be expected, from their long familiarity with their own course of husbandry, that many things would escape notice or not be deemed worthy of observation, and yet in themselves quite important, which would at once strike the notice of a stranger; and it is our object to enable American farmers to look at foreign agriculture with American eyes.

But many improvements are now going on, in England in particular, of the highest importance, in some respects vastly reducing the expenses of cultivation; in some, more than doubling the crops. The process of sub-soil ploughing and under-ground draining, the practice of irrigation, the introduction of a variety of new manures—manures of a portable, concentrated, and most active character, are matters exciting great attention, and of which, besides the information obtained from foreign agricultuual periodicals, much more is doubtless to be learnt from personal inquiry and observation. The product of wheat has been in many parts of Great Britain actually doubled by improved modes of culture. What can be more important than to know precisely and fully what these modes can be.

The quality of the dairy products of England, and of some parts of the continent, are universally admitted to be much superior to our own in general, and in most markets in the world, they command a higher price. It must be a great gain, if by any exact information to be obtained abroad, our dairy produce, as most certainly can be done, can be brought into an equal competition with others. The new Tariff laws of England, now proposing to open English ports to many of our agricultural products, especially in the articles of cured provisions, it is obvious of high importance to learn precisely in what form they may be best sent into their markets, since the success of such shipments must materially depend on this circumstance.

The production of silk in this country is destined to be, or is capable of becoming a most important and profitable branch of rural industry. It is obviously of great moment to learn the whole course of treatment of the worms and the management of the filatures in countries where the art has been longest pursued and carried to a high degree of perfection.

Much discussion has been had in our agricultural conventions on the subject of establishing Experimental Farms and Agricultural or Manual Labor Schools. As yet, no such establishments can be said to exist among us but in a limited and very qualified degree. In Europe they have existed for some time; and under the patronage of the Government in France, and, we believe, in some other States of Europe, they have been established on a liberal scale; and the course of education pursued is highly scientific and enlarged. If for no other object than to ascertain with exactness and detail, the condition and success of these establishments, the subscriber feels that in his mission he may render a most valuable service to the country.

But were nothing else gained than the drawing of public attention to these subjects, and stimulating and encouraging that awakened zeal in the cause of agricultural improvement, which is now rife throughout the country, and consequently quickening our own efforts for our own progress, no small benefit to the individual and public must accrue.

The subscriber might much enlarge upon this subject, but he would not task too severely the indulgence of his readers. The expenses of the enterprise being of necessity very great, it is indispensable that he should procure a large subscription. Sufficient subscriptions have not yet been made perfectly to secure the expenses; but the confident expectation of completing such a number, warrants the subscriber in saying that he designs to leave in the coming spring. In the mean time, he respectfully asks of those personal friends and the friends of agriculture, through the country, disposed to favor the project, to transmit their names to him at an early date. Postmasters are at liberty to do this free of expense; and any individual procuring a number of names and becoming responsible for their payment, shall receive a very liberal commission.

The amount of a subscription it is obvious, when it is considered that there will be two or three years to pay it in, is very small. It may be four—it may be five dollars, according to the number of the reports issued in the course of that time. No advance is desired where the undersigned is not known to the individual making a subscription; or where for any reason there is a reluctance in making such advance. The reports will be sent to all the large cities, where there are subscribers, and delivered without charge, unless where ordered to be sent by mail. After the first of March ensuing, the subscriber may be addressed by mail or otherwise at Boston, Massachusetts.

☞ The subscriber has already the promise from many friends, of letters of introduction to their friends in England or on the continent; and he begs leave to say, that he shall feel himself particularly honored and obliged by any letters of introduction to any gentleman who would welcome his mission or in any way assist its objects, or otherwise render him any office of civility or kindness. His objects being wholly public, he will anxiously avail himself of every advantage and facility of intercourse and observation with intelligent and respectable persons abroad.

HENRY COLMAN.

Rochester, January 2, 1843.

New-York State Agricultural Society.

This Society hold their annual winter meeting at Albany, on the 16th of January inst. At this meeting, the reports on crops and other subjects will be given, and specimens of dairy products exhibited for premium. The officers of the ensuing year are likewise to be chosen, and an address is expected from James L. Wadsworth of Geneseo, the President of the society. The necessary arrangements are to be made for holding the next show, as agreed, in Rochester, Monroe county. It is hoped that the attendance will be full. The society cannot be successfully maintained, and its usefulness extended, but by the hearty and prompt co-operation of all its members, at least of the most able and intelligent.

We are free to say that we hope the decision to hold the Annual Fair in Rochester, will be revised; and that its annual meetings will be made stationary, either at Albany or Syracuse. Rail-roads, to a degree, annihilate distance, but they do not greatly lessen the expenses of a journey. To a large portion of the people, Albany is a central point, and easily accessible; and a great many of the farmers have occasion, or find it useful, to go to Albany as the seat of government or to New-York, as the great commercial metropolis, once a year. To all, therefore, West of Albany, the journey to the show, if held there, may be made conducive to their interest or convenience. Albany is the centre of an incalculably larger population than Rochester; and is much more convenient for the visits of gentlemen from other States, whose attendance is very desirable, but could hardly be expected to any great extent at Rochester.

The New-York State Agricultural Society is destined, if well managed, to become the National Agricultural Society; and this is a new reason for keeping it at Albany. At Albany the fixtures are all at hand, but cannot be erected at any other place without great expense. We forbear to enlarge upon this subject, because we would not give offence;

and when we make these suggestions, we do it with all possible respect for the opinions of our Western friends, who think differently from us. We have full confidence in the good people of Rochester and its vicinity and the neighboring counties, to do all that they can do to make the show at Rochester what its friends could desire; but there is wanting the material to do it justice. We are not alone in these opinions; and, from our designed absence from the country at the time, have no private motives to sway our judgment.

AGRICULTURAL INTELLIGENCE.

Monroe County Agricultural Society.

A meeting of the Monroe County Agricultural Society was holden at the Arcade, in Rochester, on Wednesday the 4th of January, 1843. The attendance was good and the Society was duly organized for the current year, by the election of the following gentlemen as officers:—

Rawson Harmon, of Wheatland, President,
Will am Garbutt, of Wheatland, Vice President.
E. Darwin Smith, of Gates, "
Wm. C. Cornell, of Henrietta, "
H. M. Ward, of Rochester, Recording Secretary.
L. B. Langworthy, of Grece, Corresponding Secretary.
C. F. Crosman, of Rochester, Treasurer.
Committee of Management for the year as subjoined.
George Sheffer, Wheatland.
Nathaniel Haywood, Brighton.
George C. Latta, Greece.
Caleb K. Hobbie, Irondequoit.
E. H. Barnard, Mendon.
Jacob Strawn, Chili.
Gidon Ramsdell, Perinton.
Mills Landon, Ogden.
John F Robinson, Henrietta.
Alfred Hatch, Riga.
A. Baldwin, Clarkson.
T. P. Root, Sweden.
Darwin M. Smith, Rochester.

The subject of holding the next Fair and Show of the State Agricultural Society was much discussed, and a marked diversity of opinion prevailed as to its expediency, on account of public convenience and of ways and means to meet the necessarily large expenses incidental to it. A majority present were in favor of the attempt, as due to the Farmers of Western New-York, and it was voted that the State Society be requested to invite the county societies of Western New-York, to co-operate by their funds and means in making the show what is desired.

This would be an excellent movement; and if there is any doubt whether the funds of the county societies could be so appropriated under existing laws, an act might easily be procured from the present legislature at the instance of the state society, by which such application would be warranted. The expediency of the societies in the immediate vicinity of Monroe county, uniting with the State Society, such as Wayne, Ontario, Orleans, Genesee, and Livingston, seems quite obvious. How many others it might be desirable to embrace in the arrangement deserves inquiry. The expediency of making the state society in any case migratory, or of fixing it permanently at Albany or Syracuse, is a question entirely independent of this. Our opinions are made up on this matter, but never beyond amendment or alteration, yet it is not worth while to obtrude them upon our readers.

A resolution was passed unanimously, strongly recommending Mr. Colman's European Agricultural Tour;—and a motion to subscribe for a number of copies to be distributed as premiums was approved, but the number left to be determined at the next meeting in February.

The following premiums were awarded on grain crops:

To John B. Genegal, of Irondequoit, for a crop of corn on 2 acres and 10 rods, averaging at 70 lbs. per bushel in the ear, 85 bushels and 19 lbs. per acre—the first premiun of - - - - - - - - - - - - $7 00

To L. B. Langworthy, of Greece, for a crop of corn on two acres, at 70 lbs. per bushel, averaging more than 55 bushels per acre. Second premium of 5 00

To George Sheffer, of Wheatland, for a crop of oats grown on nine acres of land, averaging 91 bushels and 28 lbs. per acre. The first premium of 5 00

To Rawson Harmon, of Wheatland, for a crop of oats on six acres of land, averaging 77 bushels and 17 lbs. per acre. The second premium of - 3 00

To Robert H. Brown, of Greece, on a crop of barley, grown on six acres, averaging 46 bushels per acre, was awarded a gratuity of two dollars, no premium having been affixed by the society upon barley, - - - - - - - - - - - 2 00

The following premiums were awarded upon vegetable and root crops:

On Potatoes.—To George Sheffer, of Wheatland, for the best crop on one acre, being 411 bushels. First premium, - - - - - - - - - $5 00

To Robert H. Brown, of Greece, for a crop on one acre, of 388 bushels at 60 lbs. Second premium. 3 00

On Carrots.—To William Otis, of Gates, for the best 1-4 acres of carrots, being 315 bushels. 5 00

On Mangold Wurtzel.—To George Sheffer, of Wheatland, on 3-4 of an acre and 5 rods, 953 bushels, at the rate of 1220 bushels per acre. - 5 00

On Sugar Beets.—To George Sheffer, of Wheatland, on 1 acre and 12 rods, at the rate of 955 bushels to an acre. - - - - - - - - 5 00

The above includes all the applications for the above premiums.

Two bushels of wheat were presented as samples for exhibition and premium. One by Robert H. Brown of Greece. One by Rawson Harmon of Wheatland.

The committee awarded the premium for the best bushel of wheat to Rawson Harmon of Wheatland, it being the white flint variety, and very pure, weighing 61 lbs. to the bushel.

Mr. Brown's wheat was considered a very fine sample; and the weight was 59 1-2 lbs. per bushel.

The society then adjourned to Thursday the 16th of February, when their next meeting is to be held at 11 o'clock in the Arcade, Rochester, and the list of premiums for the current year established, with such other business as may come before them. The next meeting will be one of great importance and requiring a full attendance, as some arrangements must then be made in reference to the Show of the State Society the ensuing autumn.

For the New Genesee Farmer.

Wayne County Agricultural Society.

A respectable and spirited meeting of this Society was held at Palmyra on the 15th of 11th mo., 1842. The committee on Field Crops reported the following Premiums:—

To C. S. Button, for the best crop of Wheat, 5 acres 11 rods, 151¾ bushels, or about 30 bushels to the acre, $8 00

To C. S. Button, for the best crop of Corn, 2 acres 76 rods, at the rate of 99 bushels 6 quarts per acre, 5 00

To Marvin Roundy, for the best crop of Oats, 4¾ acres, 312 bushels, or 67 bushels per acre, 4 00

To D. & G. W. Kenyon, for the best crop of Potatoes, 72 rods, 167½ bushels, or 376 bushels per acre, 3 00

To Roeher & Miller, for the best crop of Ruta Baga, half an acre, 549 bushels, or 1098 bushels per acre, 3 00

Dr. Button's Wheat was *White Flint*—previous crop corn, manured 20 loads to the acre—ground prepared by splitting the hills, dragging down, ploughing once—sowed 8½ bushels first week in Oct., andharrowed once each way.

Dr. Button's Corn was *Dutton*—previous crop peas and oats—plowed twice in May, manuring with 12 loads at each ploughing—harrowed and planted about the 12th of May—hills 2 ft. by 2 ft. 8 inches—planted 12 to 16 seeds in a hill, afterwards thinned to 3 or 4—after culture, cutting the weeds twice with cultivator and hoe.

Mr. Roundy's Oats—previous crop corn, unmanured—10 bushels seed sown.

D. & G. W. Kenyon's Potatoes—used a mixture, mostly a red variety—each potatoe cut into 3 pieces, planted in drills 3½ ft. apart, one foot apart in the drill—the ground was covered with manure, ploughed, and then planted.

Rocher & Miler's Ruta Bagas—ground a clover sod, mowed last year, plowed first of May last, and well dragged—sheep manure applied at 24 loads to the acre—the first of June plowed and dragged—planted 8th of June in drills 20 inches apart, plants thinned to 8 to 16 inches in the drill—hoed twice—harvested 5th November.

The following resolution, having an important bearing on the *manufacture of American Plowmen*, was unanimously adopted:—

Resolved, That the Executive Committee, for the purpose of improving the character and skill of our plowmen, be directed to offer one class of premiums on the plowing match, to such persons only as are under *twenty years* of age.

The following officers were appointed for the coming year:—

Samuel E. Hudson, *President.*

Stephen Hyde, Wm. R. Smith, Joel Hall, J. A. Miller, R. H. Foster, Wm. Walmsley, John Borrodaile, *Vice Presidents.*

Daniel Kenyon, *Treasurer.*

George W. Cuyler, *Recording Secretary.*

J. J. Thomas, *Corresponding Secretary.*

Genesee County Agricultural Society.

The following persons were elected officers of this society, for the ensuing year, at the close of the annual exhibition at Batavia, on the 21st October:

For President.

THEODORE C. PETERS, of Darien.

Vice Presidents.

John Jenme, of Bethany,
Erastus Cash, of Byron,
Elijah Platt, of Le Roy,
Benajah Benedict, of Alexander,
Frederick P. Pendell, of Batavia,
Isaac N. Stage, of Stafford,
Wm. McCumber, of Alabama,
Chester Hannum, of Pavilion.

E. C. Dibble, of Batavia, Recording Secretary.

F. Follett, of Batavia, Corresponding Secretary.

Town Committees also members of the Executive Committee.

Alabama.—Amasa Johnson, C. Pond, Thomas R. Walcott, Franklin Guiteau.

Alexander.—H. Brainard, J. Hammond, B. Moulton, John Williams.

Batavia.—Wm. E. Heston, John B. Pike, Warren L. Fields, A. Warren.

Bergen.—Samuel Richmond, J. T. Gifford, L. Beecher, J. Elmore.

Byron.—C. Walker, Wm. Rowley, James B. Todd, E. Parker.

Bethany.—Charles Kendell, Wm. H. Rumsey, A. K. Cone, A. W. Paige.

Darien.—Lewis Clark, Orrin Lathrop, Z. Waite, James Long.

Elba.—Gilman Dickey, John Whiting, Chester Scott, S. Parker.

Le Roy.—N. D. Hart, William Holbrook, Isaac Pixley, William L. Bishop.

Oakfield.—L. Rathbone, Tracy Pardee, Clitus Wolcott, Daniel Calkins.

Pavilion.—John Nobles, L. Bradley, T. Burns, H. H. Olmstead.

Pembroke.—L. Spencer, C. Brown, J. Durham, E. Ellinwood.

Stafford.—S. Crocker, Henry Lathrop, Franklin Cash, Joel P. Reed.

Steuben Agricultural Society.

At an annual meeting of the Steuben Agricultural Society, held at the Court House in Bath, on the 2d day of November, 1842.

Lazarus Hammond, was appointed President.
Willian Baker, 1st Vice President.
Israel R. Wood, 2d Vice President.
Otto F. Marshall, 3d Vice President.
James Shannon, Corresponding Secretary.
Robert Campbell, Jr., Recording Secretary.
Henry Brother, Treasurer.

The following committees were appointed for the several towns in the county, viz:

Addison.—Uri Scofield, Henry Wambaugh, Rufus Baldwin.

Bath.—David Smith, John Richardson, Jr., G. W. Burnham.

Bradford.—Jno. C. Cameron, Reuben N. Bradley, Henry Switzer.

Cameron.—John S. Dupee, Hiram Averill, John Hedges.

Campbell.—Frederick Stewart, S. A. Campbell, Benjamin Balcom.

Caton.—Amos Lewis, Henry D. Smith, E. A. Brown.

Canisteo.—Elias Stephens, Hiram C. Whitwood, Finla McClure.

Cohocton.—John Hess, Paul C. Cook, John Nickason.

Dansville.—William C. Rogers, Robert Beach, Joshua Healy.

Erwin.—Jno. Cooper, Jr., William G. Gilbert, A. Erwin, Jr.

Hornellsville.—Otis Thatcher, Jno. R. Stephens, N. Finch.

Hornby.—F. W. Morrow, Josiah Wheat, Isaac Hill.

Howard.—Asa McConnell, John W. Whiting, William Allen, Sen.

Jasper.—Read Prentiss, Hamilton Marlatt, Edward Craig.

Greenwood.—Redmond R. Davis, Benj. S. Brundage, A. H. Stephens.

Lindley.—Eber Scofield, Jno. G. Mersereau, G. A. Ryerss.

Orange.—Alonzo Gaylord, A. Scoby, Daniel Hard.

Painted Post.—John McBurney, H. U. Bostwick, Jno. C. Hayt.

Prattsburgh.—Wm. P. Curtiss, Benj. Bridges, Jared Pratt.

Pulteney.—J. J. Benton, Ira Hyatt, John Gload.

Reading.—Jno. T. Andrews, John Roberts, Hiram Chapman.

Troupsburgh.—Nathaniel Mallory, Samuel Griggs, Ch's. Card.

Tyrone.—Stephen H. Arnold, William Kernam, Jno. Kernan.

Urbana.—Lazarus Hammond, Wm. Baker, Jno. Powers.

Wayne.—Israel R. Wood, Geo. Mitchel, M. M'Dowell.

Wheeler.—Jonathan Barney, Silas Wheeler, Levy Gray.

Woodhull.—Ira Smith, Phineas Pomeroy, Stephen Kent.

Extraordinary Crop of Oats.

Andrew Snider, of Henrietta, states to us, that he this season produced 446 bushels of oats, estimating them at the legal weight of 32 lbs. per bushel on four acres of land, that is 111 1-2 bushels per acre. The kind is called the barley oat; it is properly the Scotch potato oat; and a bushel in cubic measure weighs 42 lbs.

Three bushels of seed were sown to the acre. They were sown the last week in April. The land had been in corn, in pease, and in potatoes the previous year. The pa-r which had been in corn and that which had been in potat toes had been manured for those two crops; on that which had been in pease, wheat straw only had been plowed in.—Mr. Snider does not state which part produred best, or whether there was any difference in the yield of the differnt pieces. We hope he will give us a more particular accoun of his whole management. Jan. 4, 1843.

The following communication, as will appear from its date, has been on hand sometime. It has been kept back, because it was thought it would be more seasonable than at the time when it was received. This will satisfy our good friend that there has been no intentional neglect. We are unable from ignorance of the time, to announce the next meeting of the Ontario Agricultural Society; but we hope the Ontario farmers will not forget it, for we agree with our correspondent in the opinion of its importance.

Winter Meetings of Agricultural Societies.

Mr. Colman:

From your remarks in the last number of the Genesee Farmer respecting the late meeting of the Ontario Agricultural Society, your readers might infer that you considered winter meetings of such societies of questionable utility. Such inclement weather as we had on that day is well calculated to prejudice the public mind, and it is not surprising that severe weather for two winter meetings in succession, should have caused a prevailing opinion that such meetings had better be dispensed with. Unless good and sufficient reasons can be given why such meetings should be continued, we may as well yield the contest to old Boreas, and content ourselves to remain in a dormant state during his reign, and await the genial influence of spring before we emerge from our own comfortable firesides.

I propose in this paper to show cause why such meetings are necessary. I would premise, in the first place, that the principal fair or cattle show of agricultural societies should be held as early in autumn as the business of the farmer will permit. First, because the great object of such fairs is to exhibit domestic animals; and we all know that cattle lose the fine gloss and smoothness of the hair after being exposed to cold frosty nights; and secondly, the prospect of fine weather diminishes from the 1st October to the close of the season. Hence our societies usually select from the 1st to the 20th of October as the time most suitable for such meetings.

I now proceed to show why farmers here are not prepared to exhibit the produce of their fields at so early a day. In this wheat growing country, we usually commence harvest about the 25th July, and he is a fortunate farmer who secures all his grain and hay previous to the time of seeding. In the mean time, we must thrash some wheat, and many farmers thrash and market all their wheat before sowing. I am not saying whether this is advisable, but merely relating what is our usual course. Sowing wheat and securing corn fodder brings us into October. We have then our orchards to take care of, and although cider making is ranked among the deeds of the dark ages, we find it profitable to secure our apples for feeding stock. Our potatoes and root crops are frequently doing as well the 1st of October as at any previous time. Our pork is to be fattened; our winter supply of wood to be drawn, and many of us find some additions or repairs of buildings which are very apt to be delayed until fall. At any rate, we all find enough to do. Autumn is with us the busiest season of the year.

We will now suppose that one of our wheat growing farmers, who raises from thirty to one hundred acres of wheat a year, finds that he has a fine crop of corn or potatoes or that all his spring crops are worthy of being competitors at the county fair: will he neglect his great staple crop for the sake of the premiums on these? No, sir; few such farmers ever compete at all, and for the obvious reason it must be done by the sacrifice of more important business. Now if these crops are all to be exhibited in the winter, he proceeds in his usual course. His wheat is measured off and laid in a mow by itself; and so with his barley, oats and peas. His corn is harvested when it best suits his convenience; his potatoes and root crops are secured when they have done growing. At his leisure, when the hurry of the season is past, he prepares all the crops for exhibition; and he does it, too, at less expense than he could prepare one quarter of the amount for the fall meeting.

Our object should be to increase greatly the numbers of competitors; not have them confined to the few who cultivate but little land, and have abundance of labor at their command.

There are other reasons which might be urged in favor of a winter fair; such as the exhibition of fat cattle and sheep, and encouraging the growth of clover-seed, which we consider of much importance.

But I will conclude by saying, that I hope at our next winter fair, we shall be blessed with a fine warm day, beautiful sleighing, and a numerous assembly of the farmers of Ontario, trusting that the tide of popular opinion will then set as strongly in favor of, as it is now against winter meetings.

Yours, &c.,

MYRON ADAMS.

East Bloomfield, March 9, 1842.

Connecticut Agriculture.

We are very much obliged to our friend E. M. W. for the subjoined communications. They are full of interest. We know too well what is going on in old Connecticut, ever to think that "they are asleep" in matters of agriculture. We have had the pleasure of attending their Agricultural and Horticultural Shows at Norwich, Hartford and New Haven; and in abundance and good management they are behind no other parts of the country.

The Show at New Haven, in 1840, in which we had the honor of assisting, in its Horticultural and Agricultural exhibitions, and in all its arrangements, was capital, and would have done credit to any county and any country. We there saw a team of 350 pairs of working oxen, taken together as fine as ever came under the yoke. This year, it seems, they brought together 513 pairs. Look, too, at Danbury Show, with its 350 pairs, and at Bridgport with its 530 pairs. Connecticut, in spite of its wooden nutmegs and basswood cucumber seeds—a stale joke, which is in truth, only an implied compliment to their ingenuity and enterprise—is a Model Community, presenting much the highest average in the Union of general education, and every where in its State and individual finances, the best example in the whole country of laudable economy, of fidelity to engagements, of exemption from debt and bankruptcy, and above all, from the curse of speculation and extravagance, which has brought so terrible a blight upon many parts of the land. Vermont is the only state which can rank along side of her. If Heaven spares our life, we mean yet to fulfil one of the strongest desires we have ever yet had, that of traversing this whole state from one end to the other, of seeing the farmers and the farmer's wives at their own homes and firesides, and of gathering up the best examples of rural, domestic, and household economy; for we believe, from what we *have* seen, that in no community upon earth, are such examples to be found in more abundance, beauty and perfection.

Danbury, Dec. 5, 1842.

Mr. Henry Colman,

Sir:—From the short acquaintance I had the pleasure of making with you at your State Fair at Albany, in September last, I take the liberty to give you a short sketch of a Cattle Show and Fair, held in Fairfield County, on the 12th and 19th October last. As the county is about 35 miles in length, it was thought expedient to divide the same into three districts, and either of the three that would raise the sum of —— dollars, should be entitled to an equal share of the money allowed by the State, and have a right to select a place for holding said Fair. Two of said districts raised the sum required, and the places for holding the same were at Bridgport on the 12th and at Danbury on the 19th. The days were fine, and both were attended by an immense concourse of ladies and gentlemen.

The number of working oxen, from four towns only, on the ground at Bridgport, were 530 pairs; many of which were equal to the best pair of working cattle that I saw at Albany. There were some very fine full blood short horn Durhams, and some fine native breed, and some fine Devonshires; a few fair horses, some fine sheep and hogs; only a few specimens of wheat, rye, oats and corn, were presented; those were very good.

The exhibition of butter and cheese was somewhat limited; of roots, a very good supply; of fruits, rather limited. There were some handsome specimens of farming implements, and a very handsome exhibition of needle-work, in different forms, and many valuables for domestic use, convenience and comfort.

The working cattle presented at Danbury were from but three towns, and numbered 350 pairs, mostly in fine condition, and not inferior to those at Bridgport. The stock of full blood bulls and cows were more in number and equal in size and symmetry to those before named. The native breeds of cows and young stock were more numerous and of as fine a quality as can readily be found in the State.

The show of horses were few in number—all better fitted for *use* than for show. The show of sheep, as to size and quality, were not far behind those I saw at Albany. There were a number of swine that would compare well with those at your fair.

The specimens of corn on ear were not surpassed by any that I have seen the past season. That of wheat was but small and good. Rye and oats fine. Of roots, a fair show. Fruit very limited; farming implements, less than could be desired. Some very fine butter and cheese.

The ladies gave an interesting exhibition of needle work, in various forms, and of domestic manufactures, such as carpets, rugs, flannels, elegant damask table cloths, linen, bed-quilts, ottomans, ladies' silk, worsted, woolen, linen and cotton stockings, &c. &c. Also by some of our enterprising mechanics, specimens of their skill and workmanship, in various articles of mechanism.

Respectfully yours,

E. M. WHITE.

P. S. There will be no exceptions taken by your neglecting to publish any part of the above, as it is mostly to convince you that we are not *all* asleep in old Connecticut in agricultural pursuits; and to say that I shall enclose one dollar as an earnest for your valuable paper the year ensuing, with my best wishes for your success in your laudable undertaking.

Produce of Five Acres in Connecticut.

Danbury, December 5, 1842.

Mr. Henry Colman,

Sir:—Noticing some statements in your valuable paper, respecting the proceeds of some of your western farms, I take the liberty to send you a statement of the products of five *measured* acres of ground, the summer past, (although much injured by frost,) viz:

To E. M. W.	Dr.
For 100 Cart bodies compost manure, at $0.50,	$50 00
10 days per 2 men, 2 carts and 1 pair of oxen to shovel and draw do.	30 00
2 days spreading the manure,	2 00
2½ " per 1 man, 1 boy, 2 pair oxen to ridge ground,	5 62
5 " per 1 man planting do. (2½ feet a part.)	5 00
¾ bushels seed corn 75 c., 1½ lb. salt petre, 15 c.	0 90
6 days per 1 man, 1 pr. oxen to plow do. 3 times,	12 00
4 bushels potatoes to plant around the lot, at 33 c.	1 33

36 " leached and unleached ashes put on the corn, at 10 c.		3 60
3 days per 1 boy to put on do.		1 00
12 " spent in plowing do. 3 times,		12 00
2 qts. long turnep seed,		1 54
Sowing do. (last plowing,)		0 50
14 days in picking 515 bushels ears corn,		14 00
2 " in digging 50 " potatoes,		2 00
Team to draw the corn and potatoes,		4 00
18 days in pulling, cutting and carting 460 bushels turneps,		18 00
1 years interest on 5 acres of land at $150 per acre,		45 00
Town, state, and highway tax on do. for 1842,		1 05
		$210 00

Cr.

1842.			
Oct. By 500 bushels sound corn, at 32 c.		$160	00
15 " soft " at 15 c.		2	25
50 " mercer potatoes, at 25 c,		12	00
460 " large turneps, at 12½ c.		57	50
5 acres top stalks before cut,		4	00
5 " bottom " all good,		5	00
⅓ the cost in getting out the manure and the shovelling do. for the benefit of the after crops,		40	00
After crops,	$281	25	
Deduct	210	00	
	$71	25	Profit.

P. S. I have sold the greater half of the corn, potatoes and turneps at the above prices.

Yours, E. M. WHITE.

For the New Genesee Farmer.

Letters from Ohio.---No. 1.

Hard Times—Condition of Farmers, &c.

Mr. Editor:—Having only just commenced my rambles, I am not yet prepared to send you any "Notes by the Way," as I promised, but I hope to be able hereafter to furnish a regular supply. Do not mistake my meaning now, as to the kind of *Notes*, for if you flatter yourself that I shall send many *Bank Notes* from Ohio, I fear you will be sadly disappointed; for I have heard little else, thus far, than the cry of "hard times," "no money," "can't pay," &c., and that too, not merely among the merchants, mechanics and idlers, but among the sturdy, industrious farmers, especially among that large portion of them who are still more or less in debt for their lands.

Whatever may be regarded as the remote causes of this embarrassment, it is certain that it is none the less real; nor is it easy to prescribe the mode, or predict the period, of recovery. One thing, however, has struck me as a favorable omen, that is, the farmers throughout the whole country are beginning to inquire into the causes and condition of the present state of things, and are arousing themselves to action on the subject. Many of them begin to suspect that they have been blinded and misled by designing men, and that much of the evil might have been avoided, if the great laboring and producing class had been rightly informed and on their guard, so as to have checked the wild schemes of ambitious politicians. This leads them to see the absolute necessity there is that farmers in this country should be men of more general intelligence—should have more knowledge of the principles of political economy, and read and *believe* something besides what is found in their own one-sided party newspaper. I have never observed among farmers such a breaking up of party prejudices, and such a disposition to inquire after knowledge, as at present; and in this way I believe that great good may result from the prevailing embarrassments.

Some of the readers of the New Genesee Farmer have of late expressed to me a desire that part of its columns should be devoted to this subject, as far as it can be done without encroaching on party grounds. I have reminded them that it is hardly possible to approach the subject at all, without giving offence to some jealous partizan, or at least exciting suspicions that we were transcending our proper bounds in order to favor one side or the other of a party question. Well then, is the reply, if you cannot discuss principles or political questions, you can certainly give us *facts* and information in relation to the results of measures now in operation, having a particular bearing upon the interests of agriculture—such as we do not find fairly stated in political newspapers. Or, if this cannot be done with safety, you can at least give us information respecting the present condition and prospects of farmers in different parts of our wide spread Union. We want to know whether they all suffer alike, and if not, what makes the difference. Let us hear from the more distant parts of our country—and let us counsel and sympathise with each other as brethren. Ask your numerous correspondents to furnish particular statements of their condition and management; the value of land, price and amount of labor requisite for a crop, expense or distance of transportation to market, prices attained, cost of articles necessarily purchased for the family, amount of taxes, &c. In this way we shall be able to see how we stand in relation to each other, and we may thus learn how to endure, and finally remedy, the evils we now suffer.

Such, Mr. Editor, is the substance of several conversations had with your readers. I send them as suggestions that may be of some value, and because I believe that the patrons of a paper have a right to express their wishes, though not to dictate, in regard to the matter it shall publish. There certainly can be no objection to the latter part of the above request, and for one, I should be gratified if you would call upon your distant correspondents to send statements of the kind alluded to.

The weather is so unfavorable at present that I am unable to go about among the farmers as I intend doing. I will endeavor to give a better account of myself next month. Till then I remain,

Yours, most respectfully, M. B. B.

For the New Genesee Farmer.

Western Sweet Potatoes.

Mr. Colman:—Within the two past years, a considerable attention has been given by many in Michigan and other western states, in experimenting upon the culture of the Sweet Potatoe. Last year, the writer of this made the tour of the state, and noticed several patches of this delicious root. Henry Willis, who resides near Battle Creek, Calhoun Co., in 1841 raised eighty bushels from little more than half an acre of land, which possessed the delicious taste of the Carolinas. He sold them at a higher price and those sent to the Detroit market brought $2 a bushel. The past season, he planted near two acres, with what success I have not yet learned, but presume it to be good, as a gentleman from Marshall in the same county, informs me that he raised 32 bushels from the plants obtained from half a peck of the potatoes received by W. the year before. The experiment of raising them, was also tried this year, in the sandy belt of land, about 12 miles from Detroit. It succeeded well. A friend of the writer, who resides at Fort Gratiot, 60 miles north of Detroit, also raised 22 bushels the past season.

During a journey to the south the past season, I took some pains to ascertain the manner of preserving the potatoes through the winter, which may not be uninteresting to many of your western readers.

Select a dry place, level the earth, and on the level place lay dry straw. On the straw empty the potatoes until they form a cone; over the cone scatter dry hay, and over that lay corn-stalks, that the ends of them may rest upon the ground at the base of the cone, and the other reach above its apex. Lay on stalks enough to prevent you from seeing the pile through them; then cover the whole pile with earth. Leave no air hole on the top, but let the earth cover the pile entirely over, at least a foot thick. A small shelter should then be made over the pile so as to prevent the rain from washing off the earth. The secret of preserving them is to keep them dry and insensible to the changes of weather.

Another mode is, to pack them down in dry sand in a box and closed so as to keep the air and moisture from them and place the box where it will not be exposed to the frost or moisture.

Half a peck will be sufficient to raise a large quantity of plants.

In the month of March or April, prepare a hot bed two or three feet deep, with warm dry horse manure. Spread light sandy soil over the manure to the depth of about six inches. On this lay your potatoes close together, and then cover them three inches with the same soil. After the plants commence sprouting, the glasses should be opened so as to admit fresh air, according to the temperature of the atmosphere, and frost must be guarded against.

About the first of May, the plants which have sprouted from the potatoes should be carefully pulled off. They will easily part from the potatoe, and plant them in a looose, *dry sandy soil*. Let a furrow be run with the plow about 4 feet apart, and place manure in the furrows and throw up a couple of furrows on each side, so as to form ridges.—Plant the sprouts on the top of the ridges. After planting they need no more care than to be kept free from weeds.

In the latter part of August, the potatoes will be of sufficient size to eat, and can be removed by the hand, while others will be formed in their place and grow to a good size by the time to dig them.

If our farmers will give a little attention to this subject, they will find it to their profit by furnishing the market with a new article, that will always obtain a good price.

Yours, respectfully,

JOSIAH SNOW.

We are much indebted to the author of the subjoined communication, and believe entirely that he has the right of the matter. The opinions of our valued correspondent J., are always entitled to respect, because, we have no doubt, they are always well considered; but we shall be glad to have him answer the Queries of our friend at Rome. Our own opinions and experience on this subject have been a long time before the public, and therefore it is not necessary to repeat them here:

Rust in Wheat.

Mr. Editor:—I saw in the December number of the New Genesee Farmer, a communication headed, "Rust on Wheat Straw," by "J." In this article he ventures the "philosophy" that the scarf skin of wheat straw bursts open by the *outward action* of rain, (!) instead of the increased inward flow of sap, and that the received opinion that *rust* is *dried sap*, is altogether an erroneous conclusion.

Now, sir, permit me to ask this class of philosophic writers how it happens that the rust is found, principally, near the head of the stalk, and that there also is found the ruptures or longitudinal slits, on carefully scraping off the rust. Why does not the *outward action* of water occasion the rust indiscriminately over the stalk, if it occasions it at all? If the rust is a *fungus* or *parasitic* plant, as J. alleges, what is the philosophy of its selecting the upper part of the stalk for its lodgment, and whence comes the infinite millions of seeds at this special crisis? Explain why it happens that on the north side of a hill, where the sun's rays have little direct action on the earth, when the wheat is full grown, that the wheat is comparatively very little injured by rust? How, also, do you account for another fact, viz: that a certain part of a wheat field which had a thick coating of straw spread over the surface, wholly escaped rust, while all the residue was destroyed by it? To me it is clear that the straw prevented the sun's rays from heating the earth, and consequently less sap was forced up the wheat stalk standing on the ground thus covered. I think a *parasitic* plant would have paid no such deference to a quantity of decaying straw at the foot of the plant.

That "*dried sap*" may, through a "microscrope," have the appearance of a fungus or plant, I do not doubt; and if some of the pollen of the wheat should fall upon and be held by the exspissated juice when drying, it would not lessen its apparent resemblance to such plants, or decrease probability of the misapprehension of philosophic examiners.

When the foregoing queries are answered, I have a few more in reserve. J. H.

Rome, N. Y.

For the New Genesee Farmer.

Black Canker on Plum Trees.

In the last number of the Farmer, Mr. W. D. Cook alludes to the extensive prevalence of "Black Canker," among Plum Trees, and inquires "what is the cause."

We should be much pleased ourselves to hear Mr. Cook's query satisfactorily answered, but fear, from the comparative ignorance that prevails on the subject of *vegetable diseases*, that neither he nor any of us will be gratified for some time to come, with a *definite* and *satisfactory* solution.

There have been numerous theories advanced in the endeavor to account for the cause of this canker. Some argue, but seemingly to us with very little propriety, that it is caused by the atmosphere; reasoning in this way, that a sudden change from heat to cold produces a morbid circulation of the sap, which results in the formation of this gum or canker on the weaker or more horizontally inclined branches, while the strong and vertical branches or parts of the tree remain unaffected.

Others say that it is caused by a deficiency of saline material in the soil, which renders the sap or juice of the tree so unnaturally thick that it ruptures the small sap vessels of the weaker branches; the sap exudes and is formed by the atmosphere into gum. Others argue that it is caused by the roots of the tree penetrating into a notchy, unfruitful sub-

soil from which they imbibe deleterious food, causing various diseases, and among others the "Black Canker" spoken of. It is the opinion of some of the most eminent Horticulturists of the day, that it is caused by the coldness of the soil into which the roots have penetrated.

The opinion is quite general and may be correct, that these excresences are produced by an insect puncturing the bark for the purpose of depositing its eggs. If this be so, the surest remedy is to prevent the increase of the insects, by timely destruction of the affected parts.

We take the following from "Lindley's Theory of Horticulture," one of the best books of the kind ever published:

"Mr. Reid, of Balcarras, has indeed shown, that one of the causes of canker and immature fruit, even in orchards, is the coldness of the soil. He found that in a cankered orchard, the roots of the trees had entered the earth to the depth of three feet; and he also ascertained that, during the summer months the average heat of the soil at 6 inches below the surface was 61 degrees; at 9 inches 57 degrees; at 18 inches 50 degrees; and at 3 feet 44 degrees. He took measures to confine the roots to the soil near the surface, and the consequence was the disappearance of canker, and the ripening of the fruit."

We have, during the last few years, found many statements of a similar character, in European Horticultural publications, and from these, as well as our own experience, we are induced to believe that canker, as well as many other diseases to which trees are liable, are contracted through the roots; indeed, it is quite clear, that if the roots of the trees are buried too deeply beneath the surface; deprived of a large supply of nutrition, and imbibe food of a deleterious nature from cold ungenial sub-soil, unfruitfulness or disease, or most likely both, will ensue. We cannot expect to find trees in a healthy or flourishing state, except they receive some ordinary degree of attention.

We know how animal life and health suffer from maltreatment—how necessary a regular and abundant supply of healthy food is; with regard to vegetable life it is equally so. If we but consider the manner in which the greater number of these cankered or gummy plum trees that attracted Mr. Cook's attention, and that have often attracted our own, are treated, we will not be surprised at their condition. The great bulk of them are of the "Common Blue Damson." With an occasional exception, they have stood since they were planted, or which is quite as likely, since they happened to spring up from seed without receiving the slightest attention, either by way of pruning, or improving the soil around them; the earth in most cases, is completely exhausted with suckers and seedlings, which form a thicket for several feet on all sides.

From observation, we are inclined to believe the Blue Damson, or so generally found around the country, is much more subject to the "Black Canker," than other varieties; for we generally find it to be the first to show signs of it.

We have seen but very few instances of the fine varieties of plums, properly taken care of, troubled with gum or canker. In our nursery, where we have 40 or 50 different kinds growing, the smallest particle has not yet made its appearance; and in gardens around the city and throughout the country, where choice varieties are cultivated with care, no canker or gum is to be found. It is only where utter carelessness is manifested with regard to fruit trees, that we find the branches loaded with these gummy excrescences. Whoever wishes to keep clear of it, must plant their trees carefully, not too deep; they must keep the earth in proper order around them, remove suckers regularly when they make their appearance; and when a limb becomes affected, pare off the part, or if a small limb, cut it off and burn it forthwith. No tree affected by it should be propagated from in any way, either by suckers, scions or buds. Where trees have become affected by it, they should be immediately dug up and burned. Healthy trees should not be planted near cankered or gummy ones, for we have good reason to believe it is infectious.

Such roots as may have grown too deeply in a bad subsoil, may be easily cut off by digging down at a sufficient distance from the tree, not to injure the horizontal roots, and striking under with a sharp spade.

Where trees have been neglected, and the earth around the roots exhausted, a trench should be dug around the extremities of the roots, and filled with a compost of well-rotted manure and good surface soil, all diseased and dead limbs cut off, and the whole tree should be washed with soap suds and well brushed, to remove moss, &c. With such treatment they will recover their health and vigor, and in one year, through their increased fruitfulness, pay for all the trouble.

P. B.

The Improvement of Agriculture as an Art and a Profession.

An Address at the Exhibition and Fair of the Monroe County Agricultural Society at Rochester, October 26, 1842, by Henry Colman, *President of the Society.*

Published by request in the New Genesee Farmer.

Note.—One day when about to exchange pulpit services with a friend in a neighboring town, my little girl, about five years old, inquired of me, "if I was going to say the same words that I said last Sunday." Now in delivering and publishing so many agricultural addresses as I have done, it will not surprise me if my friends discover that I have said the same words before. All I can be sure of, as I never spoke before in Rochester, is that I have not said them in the same place. I believe, however, that this address will not be found a copy of any previous ones. At least the topics are different, though there is little that is new to be said on any subject. It is enough for me that my friends have received it kindly and think its publication will be useful; and I therefore submit it to their disposal.

H. C.

Rochester, N. Y., Dec., 1842.

ADDRESS.

Agriculture is the only subject proper to this occasion. This subject may be viewed in various aspects and relations. I design to speak of its improvement and elevation as an art and a profession. Every thing in life, dependent for its exercise upon intelligence and skill, is susceptible of improvement; and, for aught that human sagacity can determine, of indefinite improvement. Who, in respect to any art or science, is competent to say there is the end? It is only they who, through ignorance or indolence, or prejudice or obstinacy, choose to remain at the bottom of the hill, who see nothing beyond them, and pretend that they can go no further. But those brave minds, who have struggled up the first summits, rugged and difficult as the ascent may have been, see a wide prospect and an expanding horizon before them. It is with them as with the traveler, in the Alps; other and loftier summits, as he ascends, present themselves to his view, showing their bright peaks glistening in the sunbeams, stimulating his generous ambition with an irrepressible impulse, and inviting him onward to bolder efforts and nobler triumphs. Agriculture then admits of improvement. Its improvement depends on the intelligence and skill which are brought to bear upon it. There is no art or pursuit, where intelligence and skill find more scope for exercise, or more occasion to call them out, and to tax them to the extent of their power.

I shall endeavor to illustrate these sentiments. When you consider the limits which the occasion imposes, your candor will make due allowance for the necessarily superficial manner in which the duty must be performed.

The improvement of agriculture may be said to comprise two objects; first, the improvement of the art of cultivation, and second, the improvement of the condition and character of the cultivators. The improvement of the former is a small matter compared with that of the latter; the improvement of the latter, understood in its best sense, must essentially aid the improvement of the former.

I. An art is perfect, when it answers completely the end to which it is directed. The end of agriculture is to render the earth productive. The perfection of this art is when the earth is made to produce all that it is capable of producing, at the least expense, and without irreparably exhausting its productive powers. The expense of cultivation, and the exhaustion or ruin of the soil, are material considerations. Men engaged in business, or familiar with matters of finance, know how ill-judged and pernicious is that management of stock or capital, which, in seeking to make large dividends, is gradually, slowly it may be, yet certainly, exhausting the principal. Husbandry like this cannot be too severely condemned. It is as unnecessary as it is unwise, for it is among the beautiful and benevolent arrangements of Divine Providence that the earth should contain within itself a recuperative power; under good management it is capable of recovering its exhausted energies; and under a wise system of cultivation, manuring and rotation of crops, its fertility may not only be preserved but increased.

1. If we apply this test to our present husbandry, we shall be compelled to acknowledge that it is far from having reached the perfection of the art. If we look first at the amount of products, even in this favored region of Western New-York, the average yield falls far below the possible yield; and by the possible yield, I mean, not a mere theoretical or speculative production, but that which has actually been accomplished. Of wheat, some of the most intelligent farmers state that the average yield does not exceed, and this in the most favored districts, twenty bushels to the acre. Now I have known thirty bushels to be taken on large fields, forty bushels, fifty bushels, and upon one large tract sixty-four bushels per acre. I speak now of home-production, and not of foreign countries. In this matter likewise, there is little reason to question these statements, as the wheat crop is easily, and almost always, measured with exactness, in the half-bushel or by weight; but reports of very large crops of Indian corn, are always distrusted by the sceptical, on the ground that the corn may have been measured in the ear, or only a portion of the field may have been measured, and the rest made matter of inference; or no allowance has been made for shrinkage. In respect, however, to Indian corn, making all the abatements for error that the incredulous may require, it will appear that such yields have been obtained as should make the farmers, who are satisfied with the meagre crops usually obtained, at least open their eyes, if, in truth, such men have any eyes to open. I have been exceedingly surprised when informed by farmers in Western New-York, whose good judgment and intelligence cannot be distrusted, that the average yield of Indian corn does not exceed twenty-five bushels to the acre. Now fifty bushels are not an extraordinary crop. I have known seventy-five bushels per acre to be the ordinary yield of one farmer, whose cultivation was extensive. I have had authentic information of the crops of Indian corn of one farmer, having for years exceeded one hundred bushels per acre, shelled and measured accurately in the half-bushel, in the spring. I have known, upon the most undoubted testimony, one hundred and twenty-eight and one hundred and thirty-two bushels per acre produced in localities which seemed most inauspicious.

In respect to grass, the crop of hay does not probably average more than one and a half ton per acre. Now I have known many crops of three tons per acre on extensive fields; and in one case I knew more than twenty-nine tons to be taken in the same year in two cuttings upon six acres of land. In respect to potatoes, the yield is probably not more than two hundred bushels per acre. I have produced crops of more than four hundred and eighty bushels, and have known repeatedly seven hundred bushels per acre, and in one instance, at the rate of more than twelve hundred bushels per acre.

I might instance other crops; but it is sufficient to have referred to these, to show that our husbandry in general, in respect to its productiveness, is far inferior to what it may be. In many cases our soil is not inferior to any which the sun shines upon. There is in our climate no hindrance to the highest measure of production. The large crops to which I refer, are the result of skilful and superior cultivation. They do not come by chance. They show what skill and labor can effect. It will be said that they involve an expensive cultivation, but in every case within my knowledge, they have rendered an ample return for all the labor and expense incurred. An observing farmer will perceive that in most cases a few extra bushels in the yield, constitute all the profit of a crop. Thirty bushels to the acre may barely pay the expenses of cultivation; but fifty bushels, without any increase of land, or labor in planting, cultivating or harvesting, may leave a clear profit of twenty bushels per acre. It will be said that such cultivation exhausts the soil. It does not exhaust the soil any more than poor cultivation exhausts the soil; and it is followed with this remarkable difference, that it affords the means of enriching the soil and restoring its exhausted energies, which poor cultivation does not. Who ever heard that a farm became exhausted by good cultivation? Whose farms are in the best condition; the farms of those who grow the poorest, or those who raise the largest crops? Farms may be exhausted by growing the same crop too often in immediate succession on the same land; by carrying off the products from, instead of consuming them, on the farm, and thus returning nothing to replenish the soil in the form of manure; but under a wise and skilful and liberal husbandry, it would be difficult to find a country exhausted of its fertility by production. Look at our immense forests, and calculate what an enormous amount of vegetable matter is contained in the timber upon an acre of ground. But is the soil impoverished or enriched by it? Is not the vegetable pabulum, the food of plants, constantly increased by the growth of this heavy timber? Would land become more rich by leaving it uncovered and without plants? Does a naked fallow enrich the soil? A fallow may benefit the farmer by the destruction of noxious weeds. The land is benefitted by being stirred, and exposed to the influence of the air, and dew, and frost, and rain. But would a fallow, kept constantly clean, and extended even through a series of years, do any thing to in-

crease the fertility of the soil? Undoubtedly a large proportion of the carbon of which plants are composed, of the food of plants, is derived from the atmosphere, of that which is above the ground and that which is within the ground; but as undoubtedly this is received only through the organization of the plant, through its leaves and stem. The living plant itself decomposes the atmosphere, and appropriates to its own growth and nourishment that which it requires. So, likewise, it decomposes the vegetable matter already existing in the soil in a state of decay, and recovers the food, which, in the dissolution of a previous vegetable growth, has there been stored up for it, and is held ready for its use. With the exception of the salts or the mineral substances which are found in plants, and which in any case constitute comparatively a very small proportion of their substance, they derive all their food and nourishment from the air, either directly or indirectly; directly through the leaves and stem by a process of absorption well understood, in which the elements of the air are decomposed and its carbon appropriated; and indirectly through the decayed vegetable matter or humus of the soil, itself the product of former vegetable growth. So far then from vegetable production serving to impoverish the soil, it is the means of increasing its fertility.

In proportion as we cultivate and enrich our lands from their own resources, under a judicious arrangement and management, they constantly become more and more fertile. By the beneficent constitution of Divine Providence, the earth, while it contributes to the support of man and beast, is designed to become more productive, or to keep up its richness from its own activity. It is like the fountain of true charity, and beautifully emblematical of the Divine beneficence—the more it expends, the more its abundance increases. It is also like the human mind—the more active it is rendered, the more its powers are invigorated—the more it does, the more it can do—and the more its treasures are poured out, the more its fulness is enlarged. The great object of the art of agriculture, is therefore yet to be achieved. What has been done once, can be done again. There is no monopoly of power in this case. Nature is uniform in her laws and operations. It is an old saying that "fortune favors the brave;" that is, men find their power increase with their activity. According to the Latin proverb, "they are able because they believe themselves able." In many respects they command fortune. Taking advantage of the simplest of Nature's laws, and using her forces as she designed they should be used, she is never wanting on her part, but seconds every effort for improvement; and the more readily and cheerfully as these efforts are the more spirited, energetic, and determined. If any man has raised one hundred bushels of corn, or sixty bushels of wheat to an acre, who will pretend that it cannot be done again? No farmer who deserves to be called a farmer in the highest sense, and to take rank among the noblest of this Nature's nobility, the lords of the soil, ought to remain content until he has done it. When he has accomplished this, then he should not be satisfied until he has done even much more than this. There is undoubtedly a limit, beyond which we cannot advance. All human attainments are necessarily finite. But who knows where this limit is? Who ever went so far as to be certain that he could go no farther? The difference between that which cultivation has produced already in some hands, and that which is ordinarily produced, is very great, and sufficient to occupy the enterprise and ambition of most farmers, for a long time to come. But let them make the attempt to do all they can do, or rather all that can be done. They may not succeed at once. Few men succeed at once, in any great enterprise. But let them try again, and again, and again. If, after doing their best, they fall short of the goal of their hopes and expectations, yet there is a great pleasure in trying. There is a great satisfaction to a generous mind, in the mere pursuit of a good and useful object. An immense benefit comes to the community, from an example of intelligent and persevering exertion. Let there be a generous ambition and a constant stimulus to enterprise, in all the departments of human industry and activity. When the heart beats, the impulse is felt throughout the frame; and you cannot quicken the stream of life in any one part, without accellerating the circulations through the whole body. Go on, then, trying always to do better and better. • The farmers have been too often the sport of the rest of the community for their sluggishness, their indifference to improvement; and for their incredulity in respect both to what may be done, and even in respect to what has been done, where any thing extraordinary has been effected. Injustice has often, but not always, been done to them in this matter. They should shake off this apathy. They should wake up. While every other art is advancing in the career of improvement, almost with the speed of a locomotive engine, they should whip up their team, and not be distanced in the competition.

There is a beautiful circumstance connected with agricultural emulation. In many of the pursuits of life, one man gets rich by making another man poor. He climbs the ladder by putting his foot on another man's shoulder: or, he builds his own dwelling out of the fragments of his neighbor's, which he has undermined. This is often a crying injustice, and inflicts many bitter mortifications, or arouses vindictive and tiger passions. Emulation in agricultural improvement, enkindles no such baleful fires. A man can make no improvements in husbandry, without at once extending the knowledge and advantages of them to others. The enlargement of the capacities of the soil, and every increase of its productions, confers an immediate benefit upon the whole community.

Another question arises in this case, which I must not pass over. This high cultivation involves a great expense; and, with the common cheapness of land every where, can we afford the expense? Is it not better to get the same amount of crop from a large number of acres of land cultivated slightly and imperfectly, than from a smaller number cultivated with more liberality, care, and expense? Is it better for a farmer to get his one hundred bushels of wheat from five acres of land cultivated superficially; or from two acres cultivated thoroughly, and in the best manner? I believe, in general, the latter will be found the preferable husbandry in every case; but where circumstances are favorable, where there are energy and capital, I have no doubt; and my answer to the question is, not only to get one hundred from the two acres, but to get two hundred and fifty from the five acres.

It is an excellent rule, that whatever we do, we should do as well as possible. I do not refer, in this case, to what may be called the ornamental in farming, but to all that is substantial and practical. A poor man who is without means, and struggling single-handed under the difficulties which overwhelm so many of our farmers in their setting out in life, may be excused for getting along as he best can; but not so with men who have had it in their power to cultivate their farms in the best manner—who farm, not for pleasure, but for profit—and to whom farming is as much a profession and trade, as any other business is to any other man. In other departments of business, it will, I believe, be generally found true, that the more careful and thorough the workmanship, the more successful is the result. Agriculture forms no exception to the general rule; and the more thoroughly and perfectly this art or business is conducted, so much the more certain is the ultimate success.

In my opinion, a farmer can never produce too much—I mean of that which he can keep. He may grow too much of that which is perishable. He may raise too many potatoes and turneps, because these must be lost, if not consumed within the year. He may raise too much live stock, (children always excepted;) too many pigs, cattle, and horses; for, exclusive of what their growth may do towards paying for their consumption, the market for them is always capricious and uncertain; and the expense of their keep goes on whether the market be good or not. What this expense is, where a considerable stock is kept, that man can best tell who looks at his magnificent mow of hay in the autumn, and his granaries crowded with their golden treasure, which make his eyes glisten with tears of joy; and then, after keeping his hungry stock through the long winter without any improvement of the market, looks where his mow of hay was, and enters his vacant corn barn, echoing back from its emptiness his footsteps, and is then obliged to wipe away the scalding tears of repentance and disappointment. But grain crops, with care, are imperishable; and there is seldom a case in which, in the course of two or three years, the provident farmer, in almost any situation, may not find a good market for whatever of grain he may have to spare.

Under the direction of a sound judgment, therefore, as to the kind of produce, a farmer cannot produce too much. Our farmers labor under great disadvantages for want of capital. To the proper management of a farm, some floating capital is as necessary as in any branch of trade or business. The inquiry of most farmers is, with how little labor they can get along. The inquiry should be, How much labor can be used to advantage? I speak not now of men who are farming for pleasure, but for profit. No part of a farm should lie unimproved; and what the farmer does use and cultivate, he should seek to make as productive as possible. The universal complaint is, that labor is expensive. It is expensive. It ought to be. On high authority we are charged "not to muzzle the ox that treadeth out the corn;" and the faithful laborer, in every department of business, is entitled to an equitable compensation, and to a full share of the products of his own toil. The man who has the meanness to begrudge this reward, deserves himself to be a slave, and to be doomed with other slaves more worthy than himself, to his salt herrings and his peck of Indian meal, delivered on Monday morning for his week's allowance. With us, however, in general, there are no just grounds of complaint. If the labor applied to agriculture, is unprofitable in all cases, it would then be best to abandon the business entirely, or until labor is reduced to that standard of price at which it can be used to advantage for any object, without stint and without concern. But we have not yet seen that time. In all my intercourse with farmers, even with labor at the rates which it has maintained among us, where the farming has been judicious, and extraordinary casualties or circumstances are excepted, I have never known a case in which a full compensation has not been had for the labor applied. We can, therefore, afford to apply it as extensively and liberally as the land will admit of. We can afford to an acre of land, all the labor and capital which are requisite to make it produce as much as possible. Our labor, when concentrated, is likely to be most effectual. Most men say, cultivate a little land, and cultivate it well. If you farm for profit, I say cultivate a good deal of land, and cultivate it well; but do not attempt to cultivate any more than you can cultivate in the best manner. In this way your land will be in a course of gradual improvement; whereas, by the other system of cultivation, the condition of your farm is likely to be growing worse instead of better. In the latter case, you may get larger returns for less money—that is, more for less money, or more in proportion to the money expended; but in the former case, by a thorough cultivation, you get more for more! In superficial cultivation, your returns are necessarily limited and comparatively small. In the thorough cultivation, your crops are large and abundant; and, as I have before stated, the extra product is commonly clear profit. I do not know that I am understood in a case where it is rather difficult to explain myself. But I will more fully illustrate it. A farmer cultivates his 20 acres of wheat, at 7 dollars per acre, and gets for his 140 dollars, 400 bushels of wheat—that is, at the rate of 35 cents per bushel; or, he expends 12 dollars upon the cultivation, and gets a return of 800 bushels—which is at the rate of cost of 30 cents per bushel, besides leaving his land in a high condition of improvement for the succeeding crop. Or, he cultivates 20 acres of Indian corn, at 15 dollars per acre, which produce 25 bushels to the acre, and cost 60 cents per bushel; or he expends 30 dollars per acre in the cultivation, and gets a return of 75 bushels per acre, at a cost of 40 cents per bushel. This seems to me a fair statement of the case of the comparative expediency of a cheap and superficial, or a thorough and liberal cultivation. This statement may not meet all cases; for there are peculiarities of local and domestic condition, which must affect every farmer's management. But I believe there can be no mistake in the general principles.

2. It is not merely in the amount of produce that our agriculture requires improvement, but likewise in regard to the nature or kind of crops. Let us consider the wheat crop, for example. The wheat crop is the great product of Western New York. It is generally calculated that the wheat crop fails here about once in five years; that it is injured or destroyed by rust, by mildew, by insects, or by other causes. Some of these causes are beyond human control: some we can control, either in the way of prevention or remedy. I cannot now go into a discussion of these matters.

Now some of the occasions of failure may be supposed, and so some persons confidently assert, to be dependent on the particular kind of wheat we sow. We all know that some kinds are much more productive and better than others—some yielding much more in quantity, some excelling others in weight, some making more flour from the same weight, some making better flour than others. Here, then, there is great room for improvement—for inquiring whether we have got the best; and, if we have, how we shall keep it the best. In the celebrated agricultural museum at Edinburgh, there are not less than 95 different varieties of wheat, presenting great distinctions in yield, amount of flour, earliness of ripening, and exposure to disease and injury.* When such a wide field presents itself to choose from, it is easy to see how much remains to be effected by experiment, observation, inquiry, and skill. The same remarks apply with equal force to other articles of product; and as much to the improvement of the live stock of the farmer, as to his vegetable productions.

3. A vast field of improvement opens before us, in respect to new articles of produce. It is less than a century since the potato came into general use for the table. To us it seems difficult to imagine what should have supplied its place, and how men could have lived without it. The extraordinary cultivation of the flat turnep, within the memory of persons now living, revolutionized the husbandry of England. The cultivation of that invaluable root, the rutabaga, is comparatively modern in England, as well as in this country. Several grasses are cultivated with great success in other countries, which as yet are not known among us. Silk—destined, I believe, to be a most important article of domestic husbandry—is yet scarcely looked upon with patience. Immense improvements are still to be made in the stock of domestic animals. Even so late as the last century, the common hog was not known in some parts of Scotland; and when one, which was brought into the country by some man of uncommon enterprise, at one time got loose and appeared grunting in the streets of the neighboring village, the whole population was as much alarmed as if a wild beast had broken out of a traveling menagerie; and they appeared with bludgeons and pitchforks to destroy him; while the religious part of community, supposing it was a veritable personage himself whom I feel diffident about naming, came out, with the schoolmaster at their head, with an open Bible in his hand, to see if they could not "lay the evil spirit!"

Few of us are too young not to remember when that most valuable of all its kind, the Merino sheep, was introduced into the country; and now he is followed by the useful Southdown, the broadspread Dishey, and the magnificent Cotswold and Leicester sheep. So it is with the beautiful race of Improved Short Horn cattle which the honorable enterprise of many of our public spirited citizens have introduced into the country, and by means of which our farmers are enabled at once to avail themselves of the improvements of older countries, made with the highest skill, and at an immense expenditure of labor and money, during more than half a century.

The uses of the plants we cultivate, are not yet half developed. Who would have dreamed five years since, of obtaining from 600 to 1000 pounds of sugar from an acre of corn stalks? Yet this amount has been obtained the present year in Indiana; and a most creditable gentleman from Delaware, informed me a few days since, that there was a strong confidence that over three thousand pounds may be obtained from an acre. Then again comes the oil from lard, which creates serious apprehensions that the grand sport of hunting whales in the Pacific, is to yield place to the humble office of trying out hog's fat over a kitchen fire. Our swine are to make a high advance in public respect, since they are likely to beautify our habitations and directly assist in the composition of the highest works of genius. How difficult it is for us to imagine any limits to improvement! How vain to suppose that, a century hence, those who then live shall not look back upon our advances with the same disdainful compassion with which we look back upon those who have gone as far before us.

4. In cultivation, and in the implements of husbandry, there is immense room for improvement. Look at a modern cast-iron plow of the most improved pattern; and compare it with the plows used fifty years or even thirty years ago, in its lightness, its ease of draft, its facility of repair, and especially in the manner in which it performs its work. Look at the modern cradle, compared with the sickle. Look at one of Green's or Gilson's straw-cutters, compared with the old Dutch cutting-box. Look at Hussey's grain-reaper, compared with even the most improved cradle, swung by the most expert hand, and say where is the march of improvement to be arrested. Look at that most excellent machine for the purpose intended, Hatch's sowing-machine. Look at the sub-soil plow, which, with underground draining, is now working wonders in Scotland, trebling the product of land, and converting the worn-out and barren into rich and productive soils.

What a wide field for improvement is opening upon us in regard to manures! This is an immense subject, and I dare not enter upon it. A process is now spreading among ourselves, for converting straw and every other refuse vegetable substance which it formerly required months and almost years to bring into a condition for use, into the best condition for application, in a single fortnight, at a very moderate expense.† Various artificial manures are coming before the public for trial. We have ceased to wonder at the miracles which gypsum performs, because they have become familiar. Bone-dust, poudrette, nitrate of soda, and various forms of ammonia, are presenting themselves for the use of the farmer, and furnishing him with the elements of fertility, in the most concentrated, efficient, and portable form. Sixty vessels have this year sailed from England to the Pacific, to bring home that most powerful of all manures, GUANO, or the excrements, as it is supposed, of seabirds, found in almost inexhaustible quantities on the Peruvian coast. The application of manures, likewise, is a subject full of curious inquiry, and where science, founded upon the most learned and subtle experiments, has a great work to perform.

I might dwell upon these important subjects, but I must not trespass upon your indulgence. The very suggestion of these topics, displays the immense field for inquiry and improvement, which lies open to agriculture; and where the enterprising and inquisitive, the truly wise, and the truly learned, are invited to gather a rich harvest.

(Remainder in next number.)

* Le Coteur, I think, enumerates over 150 different varieties.
†Bommer's method.

For the New Genesee Farmer.

On Winter Management of Sheep.

Mr. COLMAN:—I think, so far as I have observed, with regard to the management of sheep during the winter season by many farmers, that there is room for some little improvement as to the manner in which they are protected from storms, and also the manner in which they are fed. Perhaps I can not better give my views of the treatment of sheep in winter, than by sending you a short statement of my own practice upon this subject for a number of years past. My custom has been to provide comfortable shelter for them, where they can be well protected from storms, separating the lambs and weaker sheep from the older and stronger ones, and putting them into a yard by themselves, provided with feeding troughs, in which they are fed half a gill of corn or peas per sheep daily, and with hay once a day, but no more than they will eat up clean; and then they are fed on straw through the day. The old sheep are fed one gill of corn or peas each daily without any hay, giving what straw they can eat. I have generally commenced feeding grain by the middle of December and continued to feed until about the first of April. I am satisfied by comparing my sheep with other flocks of about equal number in the spring, that it is not only better for the sheep than to winter on hay without grain, but much cheaper. It will be perceived the amount of grain consumed by each sheep, if fed one hundred and twenty days, would be less than half a bushel; the cost of which would be all that the farmer would feel, and in fact, all the expense there is, save the time of feeding; for straw when brought into the shape of manure by sheep, I consider worth more than in any other state, as there is no other that mix it so fine and evenly with animal manure, to be applied to land in a long and unfermented state.

Salt should be given regularly once a week, which conduces much to the health of sheep. I seldom lose a sheep from my flock during the winter, which I attribute to good sheltering and regular feeding. If some farmers should not like to be at the trouble of feeding thrashed grain, to their sheep, I would recommend feeding peas in the vine as I have seen it practiced with good success.

It would appear that there is very little diversity of opinion in most parts of the country, with regard to sheltering sheep in winter, as they are seldom provided with any, except what they can find by shifting from one part to another of a stock-pen, placed upon the most bleak and windy place on a farm, or changing their quarters from one side to another of a barn without either shed or hovel attached to it, to protect them from the peltings of a storm, as pitiless as their owner. The merciful man will be merciful unto his beasts. Yours, &c. M. N.

Genesee County, Dec. 1842.

There is much good and sound counsel in the above communication.—ED.

Extract from a very sensible Address of JA'S RANKINE, *of Canandaigua.*

Sources of Happiness.

Surely pecuniary gain should not be considered as the scale in which all things are to be weighed. It has been said that wisdom is better than riches—and it is indeed so. The advancement of fortune is a laudable object; but we have received the capacity for social and intellectual enjoyments, and it could not be meant by the Giver that we should receive it in vain. All our struggles in life are directed to increase our happiness—if, however, we confine our endeavors merely to the enlargement of our possessions, the gratification which may arise from success will still be a gratification to which a rational and reflecting being should be loath to confine himself. The highest order of happiness, and that least exposed to vicissitudes, is to be found in the cultivation of our intellect, and the improvement of our dispositions. Knowledge may put nothing immediately into the purse; but it will bestow a purer and more lasting enjoyment than any thing contained in the purse can afford. The more we mingle in friendly intercourse with our species, the more will our benevolent feelings be expanded; and if, in addition to mental culture, a man be at the same time in a state of peace with himself, and of charity towards all men, he may be affirmed to have the means of happiness independent of worldly circumstances.

The Farmer's Life.

Gentlemen, allow me to congratulate you on the happy situation in life, in which those are placed, who are engaged in the cultivation of the earth. In independence, in healthfulness, in amenity, it excels every other. Prudence and economy, and a just estimate of his position in society, are requisite for a man in all situations; but to whom are the facilities to independence so great as to the farmer? Favorably situated for avoiding temptations to be led away by the vanities of society, he is surrounded with every thing necessary to comfortable existence. His life, indeed, is a laborious one; but labor is no evil—it conduces to the vigor of the body and of the mind, and certainly, it is not in idleness that happiness is ever found. The very place in which his labors are carried on is favorable to him. He lives, not pent up in walls, and in a confined or insalubrious atmosphere, but in the free airs of heaven, with the boundless sky for a roof, and surrounded by every thing that is lovely in nature, and calculated to lead the mind from nature to nature's God. The sentiment of love and admiration of the beautiful works of the Creator, leads us to see him, and to know him, and to adore him. He who can plod on in his fields, insensible to these beauties, is truly of a cloddish heart. He is incapable of experiencing that sublime love of the Deity, which alone can elevate the soul above the miseries that envelope all worldly concerns, and give him, as it were, a foretaste of the pure and exalted joys of a future state."

Entomology.—In a recent lecture on the science of Entomology, by Mr. Clarke, at Birmingham, that gentleman said it was computed that the fly, maggot, slug, &c., cut off the turnep crop once in ten years, and inflicted an injury of 5s. an acre on the corn crops. Upwards of 20 out of 100 elm trees in Hackney churchyard, had been destroyed in five years by the ravages of the *scolytus destructor;* and the trees within St. Philip's churchyard, Birmingham, were suffering from the attacks of insects so, that unless means were taken to prevent their ravages, the trees would speedily perish. The ravages of the hop-fly were so great, that the revenue of the country had been affected to the extent of upwards of £400,000 in the year 1825, by the destruction of hop-plantations. Mr. Clarke concluded his very interesting lecture, by expressing a hope that he had said enough to convince his audience of the importance of studying the habits and economy of insects—a subject of peculiar interest to the agriculturist and gardener, as connected with the success or unproductiveness of their labors.

From the Farmers' Journal.—A paragraph describing a simular importation, appears in a Hull paper. Of a verity we rapidly progress towards "the beginning of the end:"

"FOREIGN BEEF.—A barrel of American salted beef, imported into Dundee under the new tariff, was brought to Perth on Monday, by an individual belonging to this place, who sold it the same day at 3d per pound. The meat is said to be of good quality, fat, and well flavored. We believe that a regular supply of this novel commodity, will soon be obtained in this quarter. We are informed that a quantity of American mutton hams have also been sold at 3d per pound."—*Perth Advertiser.*

American "mutton hams," from sheep fed on the prairies, may be imported and sold here at 2d. per lb. leaving a good profit. Do we object to bread and meat being cheap? By no means—provided our taxation be reduced to the scale paid in foreign countries.

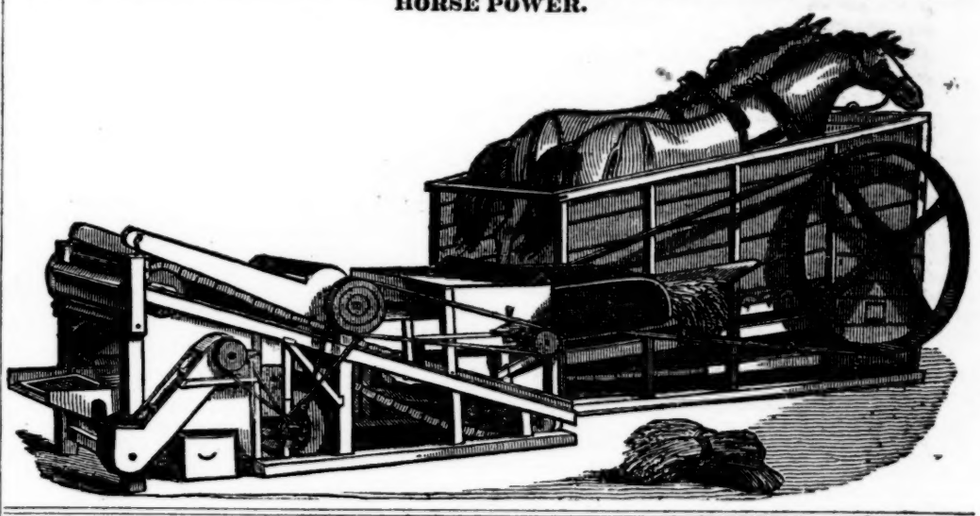
Farmers, Look at this!

The Machine represented by the adjoining cut, aside from the Horse Power, occupies a space 8 feet by 2 feet 4 inches. It thrashes and cleans all kinds of grain, effectually and expeditiously. Simple in its construction, it is not liable to get out of repair. The price of the Machine is $150, delivered in Rochester. ☞It may be attached to any power. The Machine is in use by many of the principal farmers in Western New York, and is generally approved. The Albany Cultivator and the Maine Farmer speak of it in high terms of commendation. The latter says—

"PITTS'S THRASHER AND SEPARATOR.—Having frequently recommended this machine to the consideration of farmers, it is gratifying to find that in every trial it has sustained a good reputation. It is beyond a doubt the best apparatus for separating and cleaning grain that has yet been invented. The experience afforded by two years almost constant use, corroborates the high recommendations which have heretofore been given; and the increasing demand for it, is a proof that it performs to the entire satisfaction of all who have employed it. The grain while passing through undergoes the operation of being threshed, separated from the straw and chaff, completely winnowed and deposited in a neat and perfectly clean condition at the other end of the machine—thus requiring no handling after it is once fed into the machine, till it is ready for the granary. I would again, with a knowledge of and full confidence in its powers, respectfully recommend it to the farmers of the United States as a most valuable and efficient labor-saving machine, having no fears that, with proper usage, it will fail to give full satisfaction to those who may purchase or use it.

Winthrop, Me., July 5, 1838. E. HOLMES."

PITTS' GRAIN THRASHER AND CLEANSER, ATTACHED TO THEIR PORTABLE HORSE POWER.



Essex County, Mass., Agricultural Society.

We feel ourselves particularly obliged to an old and respected friend in Danvers, Mass., for the subjoined report on plows and plowing, sent to us in manuscript, and which we cannot doubt will be read with interest and instruction. We are determined, notwithstanding our distance at the West, to keep bright and strong the old bonds of fellowship and maintain an ardent interest in the husbandry of New-England. The Essex society in this matter has long been a pattern society to the whole country.

The Committee on Plowing with double teams,

REPORT:

That sixteen teams were entefed, thirteen of which were present engaged in the work. The field selected for the purpose was directly in front of the buildings of the Theological Institution at Andover. Lots Nos. 1 to 10 were 18 rods long and 24½ feet wide. Nos. 11 to 13 were 17 rods long and 26½ feet wide; each containing about one-sixth of an acre. The soil may be described as a heavy granite soil, with a very hard gravelly or stony subsoil. Most of the fast rocks near the surface had been removed. The soil itself appears never to have been plowed more than five inches deep, and the subsoil was so hard that it was difficult to attain the requisite depth of seven inches. Of consequence, the appearance of the furrows was rougher and more broken than it would otherwise have been, and the power required to move the plow was necessarily much increased. The lots were drawn and the work was done as follows, viz:

No. 1.—Jesse Curtis, of Marblehead, owner—George W. Winslow plowman, Andrew Curtis driver. Plow made by Ruggles & Co., 2d size—work done in 58 minutes with 21 furrows. The furrows were well laid, smooth and rather shallow.

No. 2.—Charles Foster, of Andover, owner, Chas. W. Foster plowman, John P. Foster driver. Plow made by Ruggles & Co., 21 size—work done in 64 minutes with 21 furrows. The furrows were lapped a little, not quite seven inches deep, well laid.

No. 3.—Ralph H. Chandler, of Andover, owner; himself plowman, Joseph Chandler Jr. driver. Plow made by Ruggles & Co., Eagle size—work done in 62 minutes with 19 furrows, quite deep, and appeared more broken than most of the others; the work was faithfully done.

No. 4.—George P. Wilkins, of Middleton, owner, James Wilkins 2d, plowman, Andrew F. Curtis, driver. Plow made by Ruggles & Co., with a circular cutter, from one of Pike's plows—work [illegible] in 44 minutes with 19 furrows. In going the second round the point of the share was broken by striking against a fast rock; but this inconvenience was counterbalanced by the extra skill and exertion of the plowman. For this work the second premium was awarded.

No. 5.—Joseph Kittridge, of Andover, owner, Nathan Foster 3d, plowman, Israel Foster, driver. Plow made by Prouty & Co., size A.—work done in 45 minutes with 19 furrows, of proper depth, not so regularly laid as some of the others, probably through inattention to this point on the part of the plowman.

No. 6.—Samuel Jenkins, of Bradford, owner, Joshua Day, plowman, Samuel Jenkins, driver. Plow made by Prouty & Co., size A.—work done in 41 minutes with 18 furrows. These furrows were wide, of full depth and well turned; somewhat broken, favorable for the land. For this work the third premium was awarded.

No. 7.—Jacob S. Phelps, of Andover, owner, himself plowman, Chandler Phelps, driver. Plow made by Ruggles & Co., 3d size—work done in 63 minutes with 20furrows; not so even as some and rather shallow. The plow was not large enough for the work.

No. 8.—William Peters, of Andover, owner, himself plowman, George Jewett, driver. Plow made by Prouty & Co., 2d size—work done in 41 minutes with 19 furrows, irregularly laid as compared with others.

No. 9.—James Stevens 2d, of Andover, owner, Franklin Kimball, plowman, John Martin, driver. Plow made by Prouty & Co., size A.—work done in 40 minutes with 17 furrows. This team was a pair of oxen and a horse; they worked remarkably well and quick, and with little fatigue. Their work was done as well as any on the field, but in the opinion of a majority of the Committee, the team was not such a double team as was contemplated when the premiums were offered; of consequence not a regular competitor for the premiums.

NOTE.—Since this decision was made, the board of Trustees have determined that a team like this may properly be admitted as a competitor for these premiums.

A gratuity equal to half the first premium is recommended for this performance,

No. 10.—Jedediah H. Barker, of Andover, owner, Otis M. Clarke, plowman, J. H. Barker, driver. Plow made by Prouty & Co., size B.—work done in 52 minutes with 19 furrows; not cut so true as some—wide and flat. This team was well trained, as Mr. Barker's cattle always are.

No. 11.—Samuel F. Barker, of Andover, owner, Timothy Faulkner, plowman, Samuel M. Barker, driver. Plow made by Prouty & Co., Sod C.—work done in 58 minutes with 20 furrows. This land was less favorable for plowing than most of the others; it was considered well plowed and laid, but not the depth required.

No. 12.—John F. Carleton, of Andover, owner, Simeon Foster, plowman, J. F. Carleton, driver. Plow made by Prouty & Co., size A.—work done in 60 minutes with 21 furrows. This was laid very smooth indeed, and in all respects well done. For this work was awarded the fourth premium.

No. 13.—Samuel Jenkins Jr., of Andover, owner, John F. Foster, plowman, Samuel Jenkins Jr., driver. Plow made by Prouty & Co., size A.—work done in 51 minutes with 20 furrows; very perfectly done indeed, and quick, without hurry or fatigue; evincing skill in plowman and driver, and perfect discipline in the team. For this work was awarded the first premium.

RECAPITULATION OF PREMIUMS.

Samuel Jenkins, Jr., of Andover,	1st,	$12
George P. Wilkins, " Middleton,	2d,	10
Samuel Jenkins, " Bradford,	3d,	8
John F. Carleton, " Andover,	4th,	6
James Stevens, 2d, " Andover, a gratuity,		6

In attempting to discriminate among the performances of so many, so nearly equal, it would naturally follow that there would be differences of opinion in the minds of the Committee, and probably their opinions may in some instances, differ from others who examined the work. Several of the Committee have had much practical experience, both in *holding* and *driving*, and their opinions were particularly regarded in the decisions made. Where all did so well, it is not easy to say with *certainty* which did the best.

Much credit is due to all concerned, for their promptness in being ready for the work—starting precisely at the time appointed, and for the entire want of noise and hurry and bustle in their movements, and for the general propriety of the performance.

Considering the hardness of the soil and the difficulties of the work, we think it was as well done as any match we have ever witnessed. The plows used were designed to lay the furrows flat. In a light soil this is unquestionably the preferable mode of laying them; but it was the opinion of some of the Committee, that on a heavy soil like this, on land naturally moist and cold, it is better to leave the furrows somewhat broken, or a little on the edge, so that the atmospherical agencies may aid in pulverizing them, especially if the plowing is in autumn, when the furrows will be exposed to the frosts of the ensuing winter.

This Society has appropriated from $60 to $80 a year for 20 years last past, to encourage improvements in plowing. Not less than $1500 has been paid for this purpose. It is fair to inquire what benefits have resulted from this expenditure. It is not sufficient that it affords an interesting and exciting spectacle for the time, like any other game of hazard, but to justify the continuance of such appropriations, there should result some practical benefits.

Having witnessed all the exhibitions in this county, and many of those in other counties, we may be permitted to testify as to their practical influence, and do say without hesitation, that the premiums offered for the improvement in the construction and use of plows, next to those for the entire management of farms, have been among the most beneficial appropriations of the funds of the Society.

Who that remembers the structure of the plows in common use thirty years since, and compares them with the best approved structures of the present time, will doubt on this subject? It is perfectly

easy to demonstrate that a saving of nearly one-half the labor may be made by proper attention to the form and finish of the plow used.

The prominent points to be considered in the structure of the plow, are the power required to draw it, the ease or difficulty of directing it, and the manner in which it turns the furrow. The power of draft can be ascertained with great precision, by means of an instrument constructed for the purpose, placed between the end of the beam, and the chain by which the plow is drawn. Actual observation shows, that some plows will do the same work with about half the power required by others. Suppose this to be so, then one pair of cattle on a plow of best construction, will effect as much as two pair on a plow of bad construction; and at the same time will probably leave the ground in better condition for cultivation.

Take into view, also, that the plowman himself can manage the team of one pair of cattle without a driver, and that a driver will always be needed with two pair of cattle, and it is not extravagant to say that in the ordinary plowing of our fields, one half the labor may be saved by a proper attention to the structure of the plow and the discipline of the cattle.

Let any of our farmers who have not been attentive to these improvements heretofore, apply these principles on their own farms, and we will guarantee that they will save more than the whole amount of all their taxes, (excepting the *grocers tax* for that which is *not bread*,) in the first year of their application.

In the selection of plows from the numerous approved patterns before the public, it will not do to rely entirely upon *certificates*. If you do, like to the medicines in use, perfection will be found in every shop. Some plows may be admirably adapted to turn a proper furrow where the land is level and free of stones and other obstructions, that would not answer at all in rough and hard soil. Others are specially designed to set the furrows on edge, turning it but half over. Which of these are best will depend upon the character of the soil and the use for which it is intended.

The Scotch farmers, who are not a whit behind even the shrewdest yankees in their agricultural improvements, prefer the plow that cuts a narrow furrow and sets it on edge. The last iron plows that were introduced a few years since from the upper part of the state of New York, broke the ground in pieces and left the furrow in a most irregular condition; performing the double operation of a plow and harrow.

The peculiarities of the plows now most popular, are, that they cut wide furrows and lay them flat, leaving the surface when passed over with a roller, almost as smooth as before it was turned. Among the valuable plows that have been offered to the public within a few years, those constructed by Mr. Pike, of Danvers, are entitled to a respectful notice. Rarely, if ever, have we seen better work than these plows turned out when directed by the skilful hand of Mr. Tapley.

If our recollection is right, the *mould board* and the *cutter* upon these plows were particularly adapted to the purpose. We have the testimony of Mr. Colman, whose authority in matters connected with agriculture, is second to that of no man among us, "that the best working plow he ever saw was made by Mr. Pike, of Danvers." It is to be hoped that a man who succeeded so well in the first attempt in the construction of this useful implement, will persevere in this application of his labor.

If we would realize the full benefits to be derived from our plowing matches, perhaps it would be well to follow them with the offer of suitable premiums for the cultivation of the field plow. Let the distinguishing characteristics of each land plowed, be distinctly stated in the Report of the Committee. Let the cultivation be similar on all, and the quantities of produce be noted on each. Then would the result show which work was best. That plowing must be best which has a tendency to produce the best crops, whatever the form of the furrow or the beauty of its appearance.

Respectfully submitted for the Committee.

J. W. PROCTOR.

Andover, Sept. 28, 1842.

Trial of Plows.

The Committee to examine the plows entered for premium,

REPORT:

That in consequence of the numerous claims, and of the interest manifested by the different manufacturers, they found it impossible to complete their examination in a manner satisfactory to themselves, on the day of the exhibition. It was, therefore, postponed until the Tuesday following, when the Committee with three others associated with them, by order of the Trustees, were occupied about five hours in the trial of the plows.

There were ten plows presented; six of them made by Prouty & Co., four of them made by Ruggles & Co. None others were offered. The Committee regretted that they could not have had plows from other distinguished manufacturers, as they were desirous of making the comparison of merits as complete as possible.

There were three sizes of the Prouty plow, and three sizes of the Ruggles plow, nearly corresponding with each other, if we may judge from their prices, which did not vary more than one dollar—these prices ranging from $10 to $13¼. These plows appear to be designed to cut furrows about as many inches in width as they cost dollars. The depth of the furrows is easily regulated by the roller on the front of the plow. Each of the plows was furnished with a roller and an upright cutter. All the plows were nearly new and in as good condition as their owners could put them.

A piece of land about twelve rods square, was selected. It was rich, free of stones, and covered with a thick coat of grass. Apparently it had been mowed for six or eight years past. Two pairs of oxen were used; the same on all the plows, and driven moderately; not so fast as is customary in common plowing. The competitors selected their own plowmen.

It was agreed before the work commenced, that the plows should be adjusted to cut the furrows as near six inches deep as practicable. The width of the furrow to be regulated by the skill of the plowman. A dynamometer graduated from 1 to 9 was used to indicate the power applied to the work. This was placed between the end of the beam and the chain, and the index was watched by two of the Committee in all its movements. At the end of each furrow they compared their observations and took the average result of each plow. Two others of the Committee observed the width and depth of the furrows, and took the average result in the same manner.

During the experiments, each of the Committee held the plows, more or less, and examined with care the manner in which the work was done. Attention was given to the plows, as to the ease or difficulty of guiding—as to their running true, or wavering to or from the land; as to the manner in which the furrow slice was laid, whether flat or lapping, smooth or broken; and generally as to all those incidents which are considered constituents of good plowing. All these plows were designed to lay the furrows flat, and when drawn by the same team but little difference was observed in their work in this particular.

No.	Description of Plow.	Power applied.	Depth of furrow.	Width of furrow.	Earth turned.	Result.	Earth turned 100lbs power
1	Prouty's A.	35	6¾	12½	80	2,28	18¼
2	" B.	33	6	12	72	2,19	17½
3	" C.	31	6	10	60	1,94	15½
4	" C.	36	5¾	10	58	1,61	13
5	" A.	34	6	13	78	2,30	18½
6	" A.	37	6	13½	80	2,16	15
	" A.	44	7½	13	94	2,14	17
	Ruggles C.						
7	Sward C.	33	6	12	72	,19	17½
	" C.	40	7½	13	94	2,35	18 4-5
8	Eagle,	33	6	11	66	2,00	16
9	Sward D.	33½	6	11½	69	2,06	16½
10	Eagle.	33	6	10¾	65	,09	15¾

The work thus stated, was done with oxen. The numbers in the column of power applied indicate eighths of one hundred pounds. The number of square inches of earth turned is ascertained by multiplying the width and depth of the furrows together, and the proportionate result is ascertained by dividing the quantity of earth turned by the power applied. The last column shows the number of square inches of earth turned by the appplication of 100 lbs. of power. Work was done by plows No. 6 and 7, when drawn quick by a powerful span of horses, as follows:

No.	Description of Plow.	Power applied	Depth of furrow.	Width of furrow.	Earth turned.	Result.	Earth turned 100lbs power.
6	Prouty's A.	40	5½	12	66	1,65	13 1-5
7	Ruggles C.	40	6½	12	75	1,87	15

In experiments of this kind, the *time* in which the work is performed is an important item to be taken into consideration. This will be apparent when we compare the work done by horses with that done by oxen. Probably the furrows turned by the horses were done in two-thirds of the time occupied by the oxen: that is, the horses would plow three furrows while the oxen plow two. How long they would be able to continue to work in this manner is proper to be inquired into; for if they could continue through the day, and the plowman could hold out to follow them, it is manifest that the result produced would be much in their favor; especially when trained as in the present instance, were Mr. Marland's horses, to use without a driver, the plowman taking the whole charge of the team.

We have been thus particular in noticing all the incidents connected with these experiments, because in this way alone is it possible to approximate to a just comparison of merits. And when this is done, certainty is not attainable. Very much depends on the skill and adroitness of the plowman. A little additional attention would add one inch to the width of the furrow. Care to keep the plow true without pressure upon the handles will lessen the power of the draft, so that the result produced may be essentially varied by a skilful handling of the plow.

Plows Nos. 1 & 2 were entered by Joseph Kitridge, of Andover.
No. 3 " Prouty & Mears, of Boston.
No. 4 " Seth Kimball, of Andover,
No. 5 " Samuel Jenkins, Jr. of Andover.
No. 6 " John F. Carleton, of Andover.
No. 7 " Ralph H. Chandler of Andover.
No. 8 and 9 " W. S. Marland, of Andover.
No. 10 " Joseph C. Putnam, of Danvers.

While examining the work, your Committee had some doubt whether the dynamometer indicated truly the actual power in pounds weight applied by the team. But a re-examination of the instrument, as to the manner in which it is graduated, by the actual suspension of so many pounds weight upon it, as well as the assurance of the Editor of the New England Farmer, who has much practical experience in these matters, has removed these doubts. Our conclusion is, that the actual power applied to draw a plow in common grass land, varies from *three hundred* to *six hundred pounds*; depending upon the structure of the plow and the skill of the plowman. And that by proper attention to these considerations and due care in obtaining plows of the best construction, one half of the labor and expense of plowing may be saved, as compared with the manner in which it is usually done.

Thus far your Committee found their duty a pleasant one, because they felt they were eliciting valuable information on a useful subject. But when they come to review their minutes, and to attempt to discriminate where the shades of difference were so very slight, it was no easy task to be assumed which of several should have the preference. From the plows made by D. Prouty & Co., we selected No. 5, entered by Samuel Jenkins, Jr., and No. 6, entered by John F. Carleton. From the plows made by Ruggles, Nourse & Co., we selected No. 7, entered by Ralph H. Chandler. On a comparison of the three, on the conditions for which the premiums was offered, viz: "For the best plow, character of the work done by it, easiness of draught, workmanship, and cost of implement being taken into consideration," your Committee unanimously agreed to recommend that the premium of *ten dollars* offered, be awarded to Ralph H. Chandler, of Andover, for his plow, made by Ruggles & Co., sward C., costing *twelve dollars*. This was the largest size from these manufacturers on the field. We understand that they have one size larger, but we had no opportunity to compare the work of the largest size of the Ruggles plows.

In the experiments we made, we found as a general result, that the larger plows did the most work in proportion to the power applied. At the same time we give this preference, because such is the conclusion to which we came. We do not think that the manufacturers of the other plows should be at all discouraged in further attempting the perfection of this most important instrument of agriculture. We hope that one or more premiums of this description will be annually offered, that the attention of ingenious artists will be directed to the subject, and that the contest for superiority will be continued, as long as efficient laborers and patient Committees can be found ready and willing thus to devote their attention.

Respectfully submitted for the Committee.

J. W. PROCTOR.

Andover, October 4, 1842.

Sir James Murray's Lectures.—Along with other improvements in agriculture, it has lately been discovered that the defects and diseases of crops admit of prevention and cure as much as those to which animals are liable, and that even the wasting ravages of insects may be much lessened and a vast saving effected. We are assured that the imperfect evolution of grain in these damp and sunless climates may be

very much improved by imparting to the growing crops a liberal artificial supply of those elements essential to hearty and perfect wheat, oats, barley, or rye. We are very glad to find that a medical gentleman, already fortunate in other chemical improvements, has succeeded in rendering soluble the native *phosphate of lime* of *bone earth*, and has furnished this and other mineral materials, to lands, in a manure which renders grain hearty, and redolent of those elements essential to perfect *gluten* and other principles of nutriment. We congratulate the town of Belfast, which will have the opportunity of seeing experiments elucidating the most interesting and most useful topics embraced in the lectures, which commence the 6th June. We also compliment those gentlemen who are members of the first committee appointed in Ireland for arranging and encouraging the practical application of chemistry to the cultivation of land, and to link science hand in hand with husbandry."—*Belfast Mercantile Advertiser.*

Bright Prospects for Agriculture—Visit to the Wabash Valley.

Washington, November 1, 1842.

Mr. H. Colman:

Sir—I have lately returned from a visit to the Wabash Valley, and made a thorough examination of the progress of internal improvements, especially so far as those are concerned who made investments with reference to the Wabash and Erie canal.

One great cause which has retarded the settlement of this valley, next to its inaccessibility, has been the large reservations held by the Indians, embracing the finest portions of land on the canal. All these have been purchased by the United States, and are brought into market; and villages and towns will spring up like those on the New York and Erie canal, with this difference—that the soil in the Wabash Valley is superior to that on the Erie canal; being more alluvial, and as far as the prairies extend, already fitted for the plow.

I am happy to say, no pecuniary embarrassment of the States has stopped the great work on which expectations were predicated. The Wabash and Erie canal is now all but finished. During this fall the canal will be completed. Even now, boats are running from Lafayette to Lake Erie—a distance of 230 miles—if 15 miles are excepted, over which passengers and freight are carried on the Maumee river in steamboats and tow-boats. The excavations are completed, except some clearing out of stumps, &c.; the culverts and locks are built, and the workmen were hanging the gates when I passed along. It was computed that 100 men would do all that remained in four weeks. How far it will be thought best to let in the water this fall, I cannot say; but at all events, the canal will be ready for navigation in the spring, through the entire route. Already a large number of passage and freight boats are constructed, after the most approved models, to run on the canal.

The canal, from the extreme point east on the lake, viz: Manhattan, to the junction above—distance 66 miles—is 60 feet wide and 6 feet deep. From thence to Fort Wayne, 44 miles, it is 50 feet wide; and from Fort Wayne to Lafayette, 120 miles, 40 feet wide.

Passage boats have run with the mail this summer from Logansport to Fort Wayne, at the rate of over 100 miles per day; from Fort Wayne to Lake Erie a greater velocity may be expected. But allowing 2½ days from Lafayette to Lake Erie—28 hours from thence to Buffalo—and 28 hours to Albany, via railroads—the whole time occupied would not exceed 4½ days; 12 hours more will carry passengers to New York or Boston—5 days in all!

You may be gratified to know that there is now a steamboat and railroad route in operation from St. Louis to Springfield, the capital of Illinois, via Illinois river, Megadosia, and Jacksonville; and that the distance from Lafayette to Springfield is not over 150 miles. This distance may be travelled in stages, 7 to 8 miles per hour, as the roads are very level and smooth, until the railroad, partly graded, is made—thus making the travelling, from New York to St. Louis, 6 to 7 days. The Wabash and Erie canal will probably be finished to Covington in 1843. From this to Danville, Illinois, it is 14 miles, and to Springfield 130 miles. Whoever will, for a moment, glance his eye over the map, will be satisfied that the great line of travel from Lake Erie to Illinois, Missouri, Iowa, and Mississippi valley, generally must be through the Wabash and Erie canal. Emigrants arriving at New York will find a cheap conveyance, by cars and boats, provided for their accommodation. I may mention that the railroad to Indianopolis from the Ohio river, is to be completed by individuals, as well as the White Water canal, that extends from the national road near Centreville to Lawrenceburg and Cincinnati. The welfare of the State is deeply interested in these great works.

I will here remark, that Indiana and Ohio are making mutual arrangements for reducing the tolls, to secure the transportation of wheat, provisions, and such other articles as require low charges to compete with the Chicago, as well as the New Orleans market, via the Wabash, Ohio and Mississippi rivers.

I was much surprised while at Danville, in Illinois, to find such a number of wagons bound for Chicago, loaded with wheat and other produce—oftentimes travelling over 200 miles to market. On inquiry, I learnt the price of wheat at Chicago was a little better than at Lafayette, and the charge for goods was 50 per cent less. The expenses of a team to Chicago were very small, as the driver carried from home his provender for the whole trip, and slept in his wagon, living on such food as could be taken with him. The high price of goods at Lafayette has been proverbial; merchants have hitherto pleaded the great cost of transportation, saying that salt is taken to Chicago for ballast, while the freight to Lafayette was high. The opening of the canal, and competition, will soon remove all complaint against the Lafayette market. The light freights in return boats from the lake will enable freighters to fix almost their own terms, if not much below the tolls.

The reduction of the price of salt will operate very favorably on the valley, which needs so much of this article in packing her beef and pork. The numerous flouring mills being erected all along the canal, and especially at Lafayette, where 1000 barrels can now be made in a day, afford a great facility in preparing produce for market in the best form. If wheat continues even at the present depressed price on Lake Erie, it may be safely estimated to be worth next spring at Lafayette 50 cents: this will allow 15 to 18 cents for the transit on the canal —230 miles. I may here notice the present plan of transportation—it is so economical. A farmer procures a boat, and takes four horses and two boys; two horses are used at a time, and one team travels 10 miles, when a change is made: in this way the cargo 1000 to 1500 bushels, and family, are carried 50 miles per day, with little expenditure except for tolls. It is believed that steam will soon be successfully applied to canal boats, thus effecting another great revolution.

It is pleasant to witness the difference between canals and railroads on adjoining property. The former build up villages and enhance the value of land many fold; while the latter, a true monopoly, help chiefly the termini alone—often endangering, by the velocity and power of its engines, the lives of *every being* in its way.

On the New York canals, populous villages are seen thickly located, but how long will it be before such sights are found on tracks of railroads? As to the markets for the Wabash valley, New Orleans will continue to be the spring market, since boats can leave Lafayette in February, and thus forward goods to New York and Boston before any of the northern canals are opened. Subsequently the Canadian and New York markets will command the trade, and it is highly probable that the English markets can best be reached through the colonies on the St. Lawrence.

Arrangements are now going on, that, if completed, will greatly benefit produce on the lakes, giving to the North-West a great advantage over the Southern section, diminished, of course, by the reduction of the supplies in the Eastern cities, and consequently making those markets comparatively better. This is happily the legitimate consequence of diversion in trade from the usual channel. The Wabash valley can always choose between the great markets North, South, and East, and the freight to which will be about the same.

The disappointments experienced by some who have invested on routes of *proposed* canals and railroads have been so great, that many have doubted whether all western investments would not be unfortunate. Men must discriminate, and recollect that all stocks, or all lands, are not alike—remembering, also, that like causes will produce like effects. That which has raised the value of lands in the Sciota, Muskingum, and Miami valleys, in Ohio, will produce similar changes in the Wabash valley. In the latter, produce can be raised and transported to New Orleans, (as the lockage at Louisville is saved,) or to the lake, quite as low as from the former. The distance, *via* canal, is no greater from Lafayette to the lake, than from Chilicothe and Portsmouth to the same.

Both timber land and prairie, on the Wabash valley, are extremely rich and fertile. The cultivation of timber land is much encouraged by the improved mode (flat pans,) of making pot and pearl ashes. The settler can easily raise $6 to $10 per acre from the sale of his pots and pearls—thus enabling him to pay what is absolutely necessary for a farm, and giving him credit for much more, if he wishes to extend it.

The timber on the land is found valuable as an article of commerce. Staves, walnut plank and crotches, cherry, butternut, and ash timber, all contribute to aid the emigrant in his commencement.

Proprietors could to advantage encourage settlers, by furnishing sets of kettles, not costing over 40 or 50 dollars; these would last a long time, and for the use of which cheerful remuneration would be made.

As to the prairie land, I have often spoken to you of its advantages. Every year satisfies me of the propriety of such locations. I am now enabled to fence prairie land for *one-fourth what I could in the beginning*. This is done by the aid of a peculiar plow and scraper, both which cost not over $10, and make an excavation 18 inches deep, and throw up an embankment of 18 inches, forming a ditch equal to 3 feet, on the top of which I place a post and 3 or 4 rails—in all equal to 6 feet in height. The ditch is made alike upon both sides of the fence, and drains the land effectually where draining is needed. The digging of post holes is saved by running a six inch furrow and placing the posts (5½ feet long) in the same. The embankment will cover the post 2 feet, which is sufficient. The rails, instead of being as large as for Virginia fence, are only about half the size. The timber in two good Virginia fence rails will be sufficient for the fence (3 or 4 rails) upon my plan. The holes in the posts are bored with a 2½ inch auger, turned by water or animal power—two holes making the mortice 5 by 2½. The rails are sharpened by an axe or circular saw, to fill this mortice exactly. I found it took 25,600 rails to fence 640 acres with a Virginia fence; I can now fence the same quantity with the ditch and 6,000 smaller rails—making a saving in timber, hauling, and labor, almost beyond belief. From experience and observation, I am satisfied that we cannot depend upon sod fences or the hedge; the former are easily destroyed by the frost and cattle, and the latter are too often swept away by a single fire, fed by the weeds contained in the same. Besides this, my ditch leaves a sloping bank, which is speedily turfed over, if blue grass is sown—the grass being a protection to the fence against fires, affording at the same time food for stock.

Consider for a moment the productiveness of these prairies, and the ease of cultivation. On 40 acres plowed in July, sown in September last, I gathered this summer 800 bushels of the finest wheat, worth at present prices $320, and next year probably much more. This was only 20 bushels per acre—but the first crop, the seed sown upon the sod. How easy can a settler pay for his farm—$5 *per acre would require only half the crop of the first year!* What encouragement for improvement. Land can usually be rented, after it is fenced and the first crop is taken off, for one-third to one-half of the grain, affording the proprietor the interest on 40 or 50 dollars per acre—a handsome return, certainly, for the investment. How easily might Eastern proprietors make themselves comfortable by cultivating the western lands, if suitable *superintendence* could be secured: 1,000 acres of land would yield the first year 20,000 bushels of wheat, equal to 4,000 barrels of flour—ordinarily worth in New York, $5 per barrel—20,000; from which must be deducted the expenses of cultivation, manufacture, and transportation.

Corn, well tended, will yield 50 bushels per acre; this would nett from 16 to 25 bushels per acre—the first would be delivered in the crib, and the last left in the field, where it is fed to swine without gathering. One man may cultivate, after the western fashion, about 40 acres; a charge of $3 per acre allows him $30 a month for four months—a good remuneration for himself and horse. Suppose, however, the proprietor gets only $1 50 per acre net profit, this would be equal to the interest on $25 at 6

per cent., with an almost certainty of increase as the country settled. It will naturally be asked, if such are the profits of cultivation, why are they not oftener realized by those who try it? I give the facts, and the answer must obviously be, in the want of good management, or capital sufficient to work to advantage. Land certainly will yield the crop, and the market is sure, though sometimes at low prices. Things are fast finding their level—Western lands must rise, and Eastern lands fall: this is as certain as that the fountain will fall if the basin is extended.

I may add, that the attempt to raise flax for seed alone has been very successful. In some parts of New York flax is sown and mowed for the seed, and found to be a safe and remunerating crop. The new mowing machines cut the stem easily, and the stem is found to answer well for paper. Flax-seed and oil will always be good articles both for domestic and foreign trade.

Some of my acquaintances have very successfully stocked their prairies with sheep, purchased for $750 per 1,000, and improved them by crossing with the Merino, South-downs, &c. Wool, especially that which is fine, bears well transportation to the Eastern cities from the far West. 100 year-old cattle can be purchased for $300, or $3 per head; these, if heifers, will soon make cows; and if steers, may be broke for the plow, or grown and fatted for beef, and can then be driven by contract to the Hudson river for $4 50 to $5 per head.

Stock is wintered on the Wabash for very little expense. Either blue grass pastures are made, as in Kentucky, or, what promises more immediate advantages, *rye pastures*. These pastures are obtained by plowing the ground and sowing rye in August. The rye affords winter and spring food in abundance; and if stock is taken off in the spring, the rye will yield a large crop of seed. This, however, should be fed to swine. These graziers will gather most of it, and scatter enough upon the ground which they scarify, to seed it again. Once sowing has been *found to answer well for several years*. With such facilities the farmer can manage a large stock without hiring much help; and since money is so scarce, and labor sometimes difficult to be procured, it is best to do all that can be done oneself—hire but little, and make stock their own harvesters.

Before, therefore, those who have invested at the West make sacrifices to recover their capital, they had better sit down and calculate the probable consequences of a little more delay; they may also reflect upon the advantages likely to accrue from the new articles of exportation. I allude particularly to oil and candles, both from lard and tallow. *That country which produces beef and pork to most advantage, must excel in agricultural profits.*

It is now found that the whole hogs, if the hams are excepted, is turned to the best account by being converted into lard. This article answers well for foreign exportation, saves the expense of salt, and is also manufactured into oil and candles. These new manufactures must make a great change in the price of pork, since much will be tried up, and this will leave the balance in better demand. A gallon of sperm oil weighs 8 pounds; 8 pounds of lard is equally valuable for oil, and stearine for candles. The price of sperm at the West varies from $1 to $1 50, making lard for burning worth 10 or 15 cents. The hide of the hog is taken off with great rapidity before scalding, by allowing about one-half inch of fat to go with the skin. This is done to save the hide from gashes, which injure its sale so materially. This fat is scraped off with a currier's knife; the hide is tanned for $5 per dozen, and worth from $20 to $60 when manufactured; thus yielding as much as the whole hog would bring, at the present low rates in some of the Western States, viz: 1 to 1¼ cent per pound. The leather is not only used for saddles, but for collars, trunks, for binding books, (a substitute for Russia leather,) and many other purposes.

Lard exported to England, via New York, pays but 44 cents per 100 pounds, (less than one-half cent per pound;) and if sent from Canada, only 11 cents per 100 lbs. This is much wanted by British manufacturers—lard oil being found better for machinery and for wool, than sperm or palm oil. This new appropriation of lard removes one great objection against mast fed pork, which is "too oily," the very quality that is now so desirable. Indeed, some hogs are now fattening entirely on the cake from linseed and rape seed, to increase the proportion of oil; and when I last heard, the experiment was going on well.*

I have lately seen large herds of hogs raised in the woods, without any expense but salting; and these will this fall be converted into oil and candles. In the butchering of hogs, the weather is not now so necessary to be considered; the lard and oil may be made in the fall, thereby securing a six months' earlier market. Hogs were slaughtered in Indiana in October, and converted into lard—and, I presume, very profitably. And strange as it may seem, fat cattle have been lately converted into tallow at the West, with the exception of some lean meat used for drying—the product giving the owner *twice as much* as could be obtained for the cattle alive. The bones were calcined in a close iron cylinder, and thought to be worth one cent per pound for animal carbon.

Tallow is now an excellent article for shipment to France and other ports. I repeat, therefore—that country which can grow pork and tallow to the best advantage, will excel.

I cannot omit to mention the sugar of the West—*corn-stalk sugar*. Whether this becomes an article of great export, it is certain that every family who cultivates the soil can raise sufficient for home consumption; 600 to 1,000 pounds have been obtained this year from an acre of land in Indiana; and certainly, if the beet is successfully raised in France, and yields only one-third as much sugar as the juice of corn-stalk, may we not expect that the latter will be entirely successful here. I might also mention the kiln-drying of corn, which has enriched so many people in Delaware and other eastern sections of our country. Is it supposed that Wilmington, in Delaware, for instance, can compete with Lafayette in this article, while in the former the price of hogsheads or puncheons is $3 to $4, corn 50 to 70 cents per bushel, and fuel comparatively high; and while at Lafayette staves cost but little, and corn is plenty at 10 to 12 cents, and can be profitably raised at these prices, and where, too, coal and wood abound? Kiln-dried meal can be taken to New Orleans, and shipped to the West Indies, without fear of injury by heat.

I might add tobacco, hemp, broom-corn, and many other things which succeed well, but I will not enlarge on this topic. If such are the advantages of the Wabash valley, can there be a doubt but the population there will be as dense as in any portion of the interior, especially since the climate is so mild—avoiding alike the extreme cold of the North, and the scorching heat of the South; as compared with the East, resembling that of Philadelphia, without her cold North-east Atlantic breezes. To what portion of the United States can the emigrant go with better prospects of success? The soil is rich, and easily cultivated; the crops are luxuriant and various; coal and wood abound; the markets easy of access; schools, academies, and colleges contiguous; and communication such that visits may be reciprocated as often as practicable.

How soon, indeed, can an industrious emigrant make there his family a comfortable home. On 40 acres, he can raise 800 bushels of wheat the first year of his residence, and with one day's labor procure coal sufficient for the same time. Even ten acres only cultivated will supply all his wants, and give many comforts.

I have respectfully to suggest the expediency of making improvements by selling small quantities of land, say 40 acres, and taking the pay in labor on adjoining land. Forty acres at 5 dollars would bring 200 dollars. This sum judiciously laid out might enclose 640 acres, and enhance the same by the operation at least one thousand dollars. In one case, I have offered such terms, which were readily accepted, and added the privilege of getting timber enough to fence the same, after my manner of ditching, allowing also the use of some of the tops of trees for wood. Great care should be exercised in the sale of land to secure enough in cash, labor, or produce, to ensure the fulfilment of the contract. All landed proprietors know the evil of letting interest accumulate until the purchaser gets discouraged and abandons his improvement. Settlers are generally too grasping for land, and contract for more than they need, or can ever pay for. The present hard times teach many useful lessons. Men are moderating their expectation, and begin to realize that a small farm well cultivated is far better than much land poorly tilled. If in Rome 7 acres were enough, surely 40 to 80 acres will suffice in this country.

During my late visit I examined particularly into the facility of getting water on the prairie, and found that the best of water could be obtained by digging about 12 to 16 feet. The first 18 inches is usually rich loam, then comes clay, and subsequently gravel. The clay not only forms the best sub-soil for cultivation, but furnishes a good material for building.

To ascertain what could be done, I this year made an experiment at Washington City with unburnt brick, and I think from present appearance it will be entirely successful. It may be interesting to know the process.

I first dug clay in a round pit sufficient for a few thousand bricks. To this I added, as it was trodden by the cattle, a considerable quantity of straw, cut about 4 to 5 inches long—a mould was made of boards 1 foot long, 7 inches wide, and 5 inches thick, with a bottom. The clay was moulded in this by one man as fast as another could carry it away, two moulds being used to fill up the time. These bricks were dried two days on the ground, (turning them up edgewise the second day,) and then packed up in a pile, protected from the rain, and left to dry about two weeks. The foundation of the building 34 by 17, with a kitchen 17 by 18 being made in the meantime of stone, and in part by a grout of gravel and lime—the wall was commenced and soon finished, 1 foot wide and 2 stories high, except the kitchen—the division wall may be only 7 inches, the width of the brick. The exterior of the wall is plastered with lime and hair-mortar, and pebble dashed. The inside is plastered directly on the wall. The roof projects two feet to protect the wall from vertical rains. The floors are made of inch oak plank sawed 4 to 6 inches wide, and laid down without *jointing or planing*; it will be polished at some leisure day, by rubbing it with a sharp grit stone. The doors are batten doors, made in imitation of long pannels. I propose to paint the wood work, in part, with one of the following recipes which have been recommended:—1st, A mixture of *new milk* and lime slacked together, without the aid of water. 2d, Lime and a small quantity of lard, say 4 pounds to a bushel of lime—the lime to be slacked in boiling water, and the lard to be added when the slacking gives the greatest heat. Either of the above recipes may be varied by adding ochres or coloring matter not destroyed by lime, to suit fancy; probably a little potash or pearl-ash, and alum, might be added to advantage. In the above mixtures, the ingredients should be suffered to remain 24 hours before using, and occasionally stirred, to perfect the combination. Two or three coats put on with a common painter's brush, and when dry, rubbed with a woolen cloth, present a smooth, glossy appearance. This paint, though not equal to that made of lead and oil, is within the means of all, more especially those in the new countries, and will amply repay for the time occupied in putting it on. It will also be found highly conducive to health. I feel confident that common laborers can make a good cabin, or rather cottage, on the prairies in a short time, and one that will be warm in winter, cool in summer, and affording the fewest possible retreats for vermin—and at all times dry. Such cottages will be as cheap as log cabins, less expense than pisa buildings, and durable for centuries. The Hon. Mr. Poinsett observed to me, he had seen similar houses in South America that had stood 300 years.

You may wish to inquire "when can we sell to advantage?" I answer, as soon, upon consideration as you think best. The investments were predicated upon the completion of the canal, which will be in operation next season. Then sales may be commenced to advantage.

Please to accept this as a reply to the many inquiries I find on my table, and which I can only answer by giving a copy of this letter to yourself and others. Yours, respectfully,

H. L. ELLSWORTH,
Commissioner of Patents.

* Oil for winter, whether from sperm or lard, must be pressed in cold weather.

Lime in Agriculture.

Of the mineral substances, that have been employed to improve the soil, lime is the most important. All our lands seem to me to be susceptible of great benefit from it; and I believe that in many parts of this district, it can be obtained on such terms as to create a probability that it may be profitably applied. The theory of its modes of action involves chemical principles, which it would be beyond my limits to attempt to explain here; I may briefly state, however, the facts connected with its various effects.

It renders stiff and tenacious soils more friable—and light and sandy soils more retentive of moisture. It disposes all vegetable matter in the soil to decompose, so as to supply the nourishment of living plants, and it makes the nutritive matter itself more salubrious. These last effects may be seen in familiar instances. If a little quick lime be added to a heap of leaves, or rotten wood, it is soon reduced to black mould; and if a little be sprinkled on the rank spots which get up in pasture fields, and are rejected by cattle, they will shortly be eaten down.—It is not more active in rendering the vegetable matter of the soil available, than it is in giving vigor to the plants, and goodness of quality to the grain; and on no grain are its effects so remarkable as on wheat. I knew a gentleman who, from having a great command of manure, thought that he might dispense with lime. He raised by measure as many bushels of wheat on the acre as his neighbors; but it was coarser in quality, and therefore lighter, and in the British markets great discrimination of price is made on account of quality; so that he lost in two ways. He had at last recourse to lime, and with complete success.

In cold and humid climates, it is not considered that old turfy lands can be profitably broken up without lime; the straw will be abundant, but the grain light and unmatured—treated with lime, these lands are the most productive. In our climate, the vegetable matter has not such a tendency to become peaty and inert, and lime may not, to such a degree, be necessary for the purpose of promoting decomposition; but it would in every case make our whea of better quality. In our best lands, it would give health and vigor to the straw and render it less obnoxious to the diseases to which luxuriance is exposed, and it would make lands, at present too rich for bearing grain, capable of producing healthy and productive crops. From what has been said, it will follow, that it would be improper to apply lime to impoverished land, unless at the same time accompanied with manure, without which it would aid in the robbery of the soil. For other reasons, it should not be applied to wet land.

In calculating the expense of liming, the permanency of its effects should be taken into account. If a proper dose be administered, there will be no need of a repetition of it for 15 or 20 years. What the dose should be, must depend on the quality of the land; but generally speaking, it should be increased as the land is more adhesive, or as it is more filled with vegetable matter. There are no soils, probably, that would be benefitted by less than 100 bushels to the acre, or which would require more than 300 to produce the maximum effect. As, in proportion to the mass of the soil, the quantity of lime used is small, the two should be mixed together as equally and intimately as possible. The lime may be allowed to lie till it falls down into a state of flour, and then be spread out, when the soil has been previously well pulverized.—*Rankine's Address.*

SCIENTIFIC AGRICULTURE.

LECTURES ON THE APPLICATION OF SCIENCE TO AGRICULTURE.

Mr. W. M. Chatterley delivered his ninth lecture at Havering Bower, near Romford, on Monday, 19th ult., on Saline Manures, in continuation.

The subject first spoken of was the manures containing potash as a base, those of soda having been treated in the last lecture. POTASH was shown to be present in every crop—nay, in almost every plant, more particularly in white crops which contained silica (sand or flint) in considerable quantity; and most of all was it essential for wheat, as that plant contained, of all crops, the largest per centage of silica, and by potash alone could silica be taken into solution, so as to be absorbed and circulated with the sap of the plant, and subsequently deposited with its tissue. Moreover, it had been of late years discovered, that those soils which yielded the most abundant wheat crops, always contained the larger quantity of potash, and that clay soils contained it naturally in considerable quantity—that is, considerable in proportion to the quantity required; for, it was well worthy of remark, that the quantity of potash contained in the wheat was by no means sufficient for the solution of the quantity of silica existing in the plant, and this led to the belief that the potash which conveyed the silica in solution to the plant, was returned to the soil, after having deposited its burden, and there again acted the part of a solvent for a fresh portion of silica, again to be conveyed to the crop. Wheat, unless supplied with a sufficiency of soluble silica, could not grow strongly and healthily: hence the necessity for the presence of potash, in order to its abundant supply; but not potash alone, but potash, (itself an alkali) in union with an acid to neutralize its caustic properties, and form a salt. Thus CARBONATE OF POTASH, (the *pearlash* of commerce,) and NITRATE OF POTASH, (*nitre* or *saltpetre*,) were useful as manures in soils deficient of potash. The source whence these might be obtained most cheaply, by the agriculturist requiring potash, and the value of each as a manure, was the next point for consideration. With respect to pearlash, or nitre, the price would probably exclude them from general or extensive use; but, if we look to the sources whence they may be obtained, we shall find them, for the most part, within the reach of all. The pearlashes of commerce are obtained from wood ashes in such countries as Canada and Russia, abounding in forest land. The ashes of various kinds of trees, shrubs, and herbs, contain quantities of this salt, varying from less than 1-10, as in the beech, oak, and elm, to about 7 1-2 per cent., as in the wormwood. Herbs contain more than shrubs, shrubs more than trees, while the leaves and branches of trees contain more than the woody portions. Wood ashes, besides, contain varying quantities of silica, phosphate and carbonate of lime and magnesia, all highly useful for plants, containing matters which are the direct food for plants, as might readily be supposed, inasmuch as they are themselves the ashes of plants. Can potash be always obtained in sufficient quantity by these means? There are the hedge rows, bottoms, and woodland, unfortunately too frequent upon the generality of farms, which it is desirable to remove as much as possible; by burning these, and mixing with the dung, or spreading over the land without such mixture, much benefit might be derived. But another question arises—Is it economical to consume so much vegetable matter which might be used as a manure, if the seeds were prevented from germinating and the substance broken up, as might be effected by means of lime on the draining of the farmyard? The one method or the other, or in fact both, are at the option of the agriculturist, as he may be in want of either, or may find each the cheaper or more convenient. Carbonate of potash is deliquescent, (attracts moisture;) the same remark will, therefore, apply to this salt as was made with regard to those deliquescent salts mentioned in the last lecture.

With regard to NITRE, a considerable supply would be procured by the mixture of lime and vegetable matter left in contact for some length of time, which produced a decomposition of the vegetable matter, the carbon of which being converted into carbonic acid united itself to the lime and formed chalk; while any portion of nitrogen which it contained, together with a supply obtained from the atmosphere, was, by the influence of the lime, induced to unite with the oxygen of the atmosphere, forming nitric acid; the nitric acid then combined with the lime to form nitrate of lime, and with any portion of potash that might be present to form nitrate of potash. By this means it may be observed that nitrogen and potash are both supplied at the same time, and to the nitrogen must be attributed a large share of the fertilizing effect of the salt; and this leads us to the consideration of the other saline manures which contain NITROGEN. NITRATE OF SODA is nothing more than another native nitre, with *soda* instead of potash as the base in union with nitric acid; it is, perhaps, yet to be decided which of these two possesses the most fertilizing properties, though the preponderance, (especially for crops that contain potash,) is perhaps in favor of nitrate of potash. The difference of price will decide which will be used by the farmer; but it seems more than probable that other and cheaper sources of nitrogen will be chosen when it is desirable to supply this substance in a saline form. Farm-yard manure, and animal matter in general, as nightsoil, urine, blood, and guano, have already been spoken of as containing salts of ammonia, and ammonia has been shown to consist of hydrogen and nitrogen. The superiority of ammonia over nitric acid for the supply of nitrogen to plants is undoubted, and seems to be due to the greater facility with which it undergoes decomposition, forming the various nitrogenous products of vegetables, as gluten, albumen, &c., while the facility with which hydrogen (the other constituent) unites with the universally present oxygen to form water, is an additional cause of its fertilizing effects.

SULPHATE OF AMMONIA seemed the salt best adapted for the use of the farmer, to supply his crops with nitrogen. This salt was now prepared by Mr. Croll's patent process for the purification of coal gas, and might be bought for about 16s. the cwt., and would most likely become much cheaper, as an inexhaustible supply might be procured by fitting up Mr. Croll's apparatus at the various gas works throughout the kingdom; a result which would no doubt ensue upon the demand for this article becoming general among agriculturists, who could not better consult their own interests than by using this salt; not in large quantities, for in most seasons from ½ to ¾ of a cwt. per acre, as a top dressing, applied at two or three separate periods, would be found preferable; and with this, as with all the saline manures, small dressings judiciously applied, according to the condition of the crops, were more successful than large dressings of two or three cwt., or more, at a time, as recommended for some saline manures, or of 40 to 50 cwt., as recommended for others. These small dressings would be proportioned to the wants of the crop, neither *burning them up*, nor making them *too growthy*, as has been complained of in some instances. *Soot* owes its efficacy to sulphate of ammonia, contained in it. With regard to the efficacy of sulphate of ammonia, Mr. Chatterley showed a tabular review of result of experiments conducted upon a bad plant of wheat, on Mr. Hall's farm, with different quantities of this salt, in proof of the latter statements; the increase had been altogether beyond expectation: it should not be drilled with the seed.

With regard to saline manures in general, they, like all others, should not be applied unless the land is deficient in the substances which they, by their constituents, are fitted to supply; nor to land which is not properly drained; and, with regard especially to manures containing nitrogen, it should be remembered that, in order that they may stimulate the plant to growth, the vegetable matter must be present in the soil in sufficient quantity to supply the material, for though much may be obtained from the atmosphere, such as nitrogen and carbonic acid, still the soil should be in a good condition to supply more carbonic, phosphoric, and muriatic acids, lime, potash, soda, and magnesia, silica, &c., as these cannot be obtained elsewhere, and are absolutely necessary to the healthy existence of the plant. It is for want of a due attention to all these circumstances that so many contradictory accounts of the value of saline manures are propagated, and that so much of unmerited praise and blame have been bestowed upon them.—*Farmer's Journal.*

On Animal Manures.

Translated from the German.

BONES.—No manure has of late excited more sensation than bones. It was more especially the English fixed attention upon them, assuring us that some sorts of agricultural produce have been doubled and trebled by the use of bone-dust.

Notwithstanding the great repute in which bone manure is held by the English and other nations, it has made but little progress in Germany! Whence does this arise? I am of opinion that the German soil (in such places where bone-manuring has been practised without success) is not yet exhausted of bone earth (phosphate of lime,) whilst the soil of England has been so much exhausted of it by the continual growth of wheat, that it cannot be called into new fertility, without either a manuring with bones, or the phosphate of lime therein contained. That it is this substance to which bones chiefly owe their manuring quality, is proved satisfactorily by the circumstance, that even burnt bones, in which, therefore, the whole of the cartilage containing nitrogen is destroyed, still yield a superior manure.—Of this I have become convinced by comparative experiments, which I repeated more than once.—Moreover, those bones will yield manure, which. by a protracted boiling, have been deprived of their cartilaginous matter; for instance, the sheep bones used in making paper or glue. I have often found that manuring with bones produces a most decided effect upon soils which contain none, or very little phosphate of lime, provided such soil was not deficient in humous earth, the solvent of phosphate of lime. I have also remarked that bone-dust is nearly useless, if the soil was not deficient in this phosphate. Amongst the countries where manuring with bone-dust has proved useless, Mecklenburg is one; and although I cannot positively assert that its soil contains a sufficient quantity of phosphate of lime yet this is more than probable, because all the marl

with which, for the last 20 years, the fields of Mecklenburg have been manured, contains a great deal of phosphate of lime. Bones are also rendered fertilising in consequence of their containing soda and common salt; 1,000 lbs. of them contain 35 lbs. of these substances, and it is known from experiment that 60 lbs. of common salt are sufficient manure for one Magdeburg acre. Moreover, their containing phosphate of magnesia (a substance especially found in wheat,) must also be advantageous, for in 1,000 lbs. of bones, the usual quantity of manure for an acre, 30 lbs. of phosphate of magnesia are to be found. The small quantity of fat and marrow which bones contain is scarcely to be taken into account, although some have laid much stress upon it.

Animal Offal.—All animal remains, with the exception of their excrements, are comprised under the above denomination. Animal offal is a very powerful manure, a circumstance which is to be ascribed to its being composed of substances which, even in small quantities, advance vegetation in a very powerful manner. It contains, besides some other elementary substances, a great quantity of nitrogen, sulphur, phosphorus, and chlorine, of which it was stated previously, that even the smallest quantities perform an important part in the nourishment of plants. But it is especially the nitrogen, which renders offal such superior manure. Moreover, animal offal contains these substances in such combinations, as are either by themselves very soluble in water, or as, by their decomposition, form substances which require an equally small quantity of water for their decomposition, which circumstauces, however, cause its action to be very transient. In all places where agriculture is in a high state of perfection, animal offal is carefully collected and used as manure, whilst it is neglected in countries where farming is carried on without intelligence: in such places it is not considered worth while to carry on the land small quantities of matter, because it is believed that the value of manure consists in its mass. Amongst the most valuable kinds of animal offal are the following:

Carcasses of Dead Animals.—Carcasses consist of bones, flesh, fat, and other soft parts. The muscular fibre, vessels and nerves, the cellular tissue, albumen and serum, osmazome and mucous matter, are those substances of the flesh which contain abundance of nitrogen, sulphur, phosphorus and chlorine, and possess a high value as a manure. Of much less importance is the fat, which, in its pure state, consists only of carbon, hydrogen and oxygen, and it would be still less worth if there were not the cellular tissue, in which the fat is contained, to which the manuring quality of the refuse of the tallow-melter is to be ascribed. The flesh of animals dying a natural death, soon passes into a state of putrefaction, as it is not deficient in water, and it developes during the process a great quantity of ammonia, phosphuretted hydrogen, and some other putrid gases not yet sufficieotly known; if, therefore, nothing of these substances is to be lost, it must be as soon as possible mixed with matters which are able to receive and chemically bind the gases thus developed. In Belgium the flesh of dead animals, or such as have been killed on account of being diseased, is cut immediately into small pieces, which are divided over the field, and soon covered by plowing them in. Against this procedure nothing can be said, provided the soil contains much humic acid, by which the developed ammonia can be chemically fixed. Still it is better to cut the flesh of carcasses in small pieces, and put it, with moist soil rich in humus, into a hole where it may rot, by which means all the ammonia will be chemically fixed. The bones also, which do not require to be bared of flesh, may be equally placed in the hole, and afterwards taken out and used by themselves. We generally find it stated that carcasses should be mixed up with quicklime, and thrown into a ditch, where they may decay; but this occasions a considerable loss of fertilizing materials, because the greatest portion of the nitrogen escapes. For if a portion of it combines with the oxygen of the atmospheric air, and forms nitric acid, which may enter into chemical combibination with lime and ammonia, and so becomes nitrate of lime and ammonia; still, the most of the nitiogen combines with hydrogen, and escapes under the form of ammonia. If nitrogen is not to be wasted, no lime should be added, nor is it at all necessary, if the carcases have been mixed with soil rich in humus. It is true, that lime prevents the formation of phosphuretted and sulphuretted hydrogen gases, because by its presence phosphoric and sulphuric acid is generated out of the phosphoric and sulphur; but soil rich in humus will also (if not employed in too small a quantity) secure the putrid gases just as well; and as this kind of soil is by no means destitute of gases, sulphuric and phosphoric acid will in this case also be generated. The entrails of dead animals are to be treated in the same way as the flesh, if they are to yield the greatest advantage as manures. After they have been frequently worked up with humous soil, and are properly decayed, they form an admirable topdressing; but must always be employed in small quantities, or they will make vegetation push much too luxuriantly.

Lectures on the Application of Science to Agriculture.

Mr. W. M. Chatterly delivered his *tenth* lecture at Havering, near Romford, on Monday, September 26th, on Early Manures.

Lime itself, and the measures having lime for a base, were first spoken of.

Chalk, the various *limestones* and *marble* were explained to have lime present in them, in union with carbonic acid, and in some cases with sulphuric acid, forming *carbonates* and *sulphates of lime*. In the geological formations of this country, lime (in combination with various other substances,) was described as appearing in nearly all, with the exception of the carboniferous or coal measures, and the lower granite. Chalk and limestone appeared in the various formations, united with the other general constituents of the peculiar strata; the upper chalk, it was well known, was mixed with what were commonly termed chalk-flints; but besides this, in the substance of the chalk itself, both in the upper and lower strata, a quantity of silica, or sand, was found incorporated; in the various marls, clay was superadded to these two; and from the clay downwards, through the oolites, sandstones, and gneiss, lime was found in a greater or less proportion; in some cases forming the chief substance of the rocks themselves, as in the case of the Purbeck, Portland, and Yorkshire stones; in the Bath stone, it is mixed with oolite clay; in the magnesian limestone with magnesia; in the red sand-stone formations, old and new, with sand; whilst in the primary strata we find limestone intermingled with clay and sand, as in the Welsh flags, and among the clay slate, mica-slate, and gneiss rocks, lime is but sparingly distributed.

Carbonate of lime is a necessary ingredient of all fertile soils, it is always found in them and in the plants which grow upon them, while those soils which, though possessed of all other requisites, are destitute of lime, are barren; but may be rendered fertile by the addition of this substance.

Caustic Lime, or Quick Lime as it is termed, is carbonate of lime, which has had the carbonic acid expelled by heat, and in this condition has a great affinity for water and carbonic acid; when water is added, it falls to powder, with great developement of heat, and forms a definite compound of water and lime, called *hydrate of lime* or *slaked lime;* (the heat is caused by the caloric of the water which was latent while it existed in the liquid state, being given out as it united with the lime, and became thus converted into solid water when in combination.) The affinity of quick lime for carbonic acid was very considerable; carbonic acid was always found, as had been shown in a previous lecture, in the atmosphere; hence caustic lime, after some exposure, became again converted into chalk or carbonate. The improvement of heavy clay soils by lime and chalk had been practiced from time immemorial; to explain how they act, and the difference of their action upon the soil, was the next question. If lime be converted into chalk in the soil, why not use chalk at once? Chalk, pure dry chalk, loses 44 per cent. of carbonic acid by burning; but chalk, as we ordinarily meet with it, contains a considerable quantity of water—so much that such chalk loses by burning 59 per cent. of carbonic acid and water together. Water and carbonic acid may be obtained at home, and if the expenses of burning these off be much less than the cost of transport, it is clear that the farmer would be a gainer in this way alone, for he would bring the same quantity of calcareous matter in 41 loads of well-burnt lime as in 100 loads of chalk.

But, besides, it is worthy of inquiry whether the chemical action of lime upon heavy lands may not really improve them in a greater degree than the mere addition of chalk:—1st, A more intimate mixture of the finely-pulverized slaked lime with the soil can be made, than the large pieces in which chalk is obtained at the pit, and this pulverization is obtained at little or no cost of labor or material; moreover, the beneficial effects of lime upon the soil is not confined to those above mentioned, and to the rendering it lighter and more easy to work, which latter is equally the effect of chalk; but caustic lime has a peculiar action upon vegetable matter in the soil, when aided by moisture, and that is by its great affinity for carbonic acid; it seems to induce the carbon of the vegetable matter to unite with the oxygen of the atmosphere, or of any other neighboring source, and thus also form carbonate of lime, while the texture of the remainder is so broken up as to render it more easy of decomposition by the ordinary action of the air and moisture. Mixed with heaps of weeds and vegetable rubbish, it produces this effect also on them, and moreover destroys the power of germination of the seeds, thus converting noxious matter into useful manure. It destroys also, worms, slugs, grubs, and in some cases, even wire-worms.

Lime is slightly soluble in water; 750 lbs of water dissolve 1 lb. of lime. Carbonate of lime is insoluble in water, but is soluble in water containing any acid, even carbonic acid (this was proved experimentally,) and in this way lime was conveyed to plants in solution. The presence of lime in a soil was also useful to neutralize the acetic acid formed by most plants during their germination. All running and spring water contains lime, hence some of the beneficial effects of irrigation. The quantity to be applied varied much according to the object proposed to be obtained by its application, that it was impossible to lay down any rule; it must depend on the nature of the soil, the rotation of crop, &c. Land was said to "tire of liming," when, after several years' addition, it contained as much as the crops grown from it required, or when the vegetable matter of the soil was so speedily exhausted by the continued action of the lime, that any further addition became an injury instead of a benefit.

Gypsum or Sulphate of Lime was next spoken of as another mineral production of this country, highly useful as a manure for clovers, tares, peas, and other leguminous crops. This salt, which was a union of sulphuric acid and lime, was a product of several of our manufactures, and might be obtained at a very cheap rate. The refuse scale pan of the salt makers consists chiefly of sulphate of lime; the ashes of peat owe their efficacy on pastures chiefly to this substance. Sulphate of lime is slightly soluble in water, and the crops just mentioned contained it in considerable quantity, it having been calculated that a clover crop carried off the land from two to three bushels of sulphate of lime per acre. Land "tired of clover," would be found generally either to be deficient in this substance, or to require to have a part of the sub-soil broken up in order to supply it to the crop. Gypsum had frequently been blamed as a manure for not answering the sanguine expectations of many clover growers; in such cases, it would generally be found that sulphate of lime really existed in the soil, and it was something else that the crop required.

Clay (*alumina,*) and Sand (*Silica,*) were also treated of as manure necessary to be added to soils deficient of them.—*Farmer's Journal.*

Natural Silicate of Potass, for Manure; in Felspar and Granite.

To the Editor of the New Farmer's Journal:

Sir—Mr. Trimmer's letter, in your journal of the 19th ult., on manuring for wheat, is a gratifying illustration of the advantage of science to the practical farmer. Knowing the constituents of his crops and of his manures, he has reasonable grounds for judging which manure will best promote the growth and maturation of each plant; and the best mode, time and proportions of the application: thus by adapting each to its fit purpose, economising his manures whilst he improves his produce.

On a future occasion I may have something to say about the nitrogen; but my present object refers to potass, which being drawn from the soil by every crop, requires constant renewal. Wood ashes are not produced in this country, in sufficient quantity, burnt weeds and leaves, and the farmyard straw return only a part of what was drawn from the soil; the potass in the food, both of man and beast, coming chiefly in the liquid excrement, and running to waste, not only in town sewerage, but too often of farm-yard drainage. Liebig's artificial silicate in potass, referred to by Mr. Trimmer, for agricultural

purposes, may be more likely realized in the westerly districts of Germany, than in our coal burning country, where the potass itself seems to be wanting.

There is, however, in our vicinity, an inexhaustible store of this alkali; though not hitherto thought of as a manure, nor in its present hard and durable state, fit for the purpose. If slate and dunstone contain potass enough to fertilize their soil, felspar comprises it in much larger proportion, about 17 per cent. of its weight; and felspar is the basis of Dartmoor granite. This granite may contain about ten per cent. potass (varying, of course, with the proportion of felspar,) in too hard and compact a state to yield to the weather, fast enough for the purpose of a manure. But this hardness is not difficult to reduce. By turning it whilst red hot, into water, it is rendered quite brittle and crumbly; and being then mixed with fresh lime and water, is made much more susceptible of decomposition, and easily yields part, at least, of its potass. The surface granite, already softened by the weather, will not do, having already lost a part of its alkali; china clay, apparentlydecomposed granite, is almost entirely destitute of potass; and the soils formed upon granite are unproductive, probably from the same cause.

The chippings and fragments of the solid stone, accumulating at the granite quarries may be heated with turf, in common lime kilns; and raked down into water, as fast as they get red hot; in which manner many tons per day may be done in one kiln. Thus rendered brittle, it may be rapidly crumbled by a water power crushing mill. And as turf and water are both plenty about the granite, this rough powder might be sold to the farmer at a lower price than lime.

A ton of this powdered granite mixed with a ton of fresh lime, being heaped on a thick bed of earth, and closed in all around with earth, leaving the top open; water is to be poured on gradually, enough to slake the lime entirely, and then all covered in; the bed of earth at bottom being one or two feet thick, and round the sides eight or nine inches; making good the cracks produced by the swelling of the lime in slaking. After two or three days it may be uncovered; the granite and slaked lime well mixed up with more water, to a soft mortar; and again all covered in close with earth. In this state it may be left two or three months at least, and better if longer; keeping it always wet and soft. When wanted to use, the whole heap should be well mixed together, including the earth, which will be impregnated with solution of potass. It is then fit for spreading.

Two hundred weight of granite will contain as much potass as a good acre of wheat (say thirty bushels) including the straw. Hence a ton, prepared as above, might do (reckoning the time required for decomposition, and the other manures employed) for two or three acres of light soil, once in four or five years. Loamy and dunstone soils are not likely to want potass so often. But in an article yet untried, we cannot recommend proportions with much confidence. Experiments, at first in the small way with different proportions, on different parts of a field, exhausted of potass, but not of humus, and not over-limed, giving the whole about one hundred weight of bone dust per acre (or a ton of night-soil) that the crops might not fail for want of phosphates, would furnish some indications for future guidance. Its durability must be determined in the same way: of course the faster it is decomposed, the greater will be its early effects, and the less its permanency.

The object is to convert the hard crystalline alumino-silicate of potass into a crumbly calcareo-silicate of potass, much more susceptible to moisture and to the weather. Thus prepared, it yields its potass very slowly; and if required more active, it may be melted in a reverberatory, with 10 per cent. of salt; but this would add so much to the cost as to pay only where granite or felspar requires long carriage, and where fuel is cheap. In general it would be better economy to make up the activity by quantity, and thus get durability at the same time.

Bassac, or any other rock rich in potass, will answer the purpose where granite or felspar is too distant for carriage. I am, &c.,

J. Prideaux.

October 4, 1842.

Soap Locks Protected.—By the new tariff a duty of twenty-five per cent. ad valorem, is put upon "human hair cleansed and prepared for use." Our bucks will therefore be relieved from the rivalry of foreign soap locks.

POLITICAL AGRICULTURE.

From the Liverpool Courier.

The New Tariff.

Yesterday the first sale of foreign provisions under the new scale of duties, took place in this town. The quantity offered was considerable, and the attendance appears to have been extremely good, many persons having come from distant parts of the country.

Yesterday, the 10th of October, was the day fixed by the new tariff for the reduced duties on salted provisions; and, in consequence, public sales to a considerable extent, were arranged to take place this day. These sales comprised, 1,522 barrels of American beef, 2,199 barrels of American pork, 311 barrels of American hams, 691 barrels of Canadian pork, and 35 barrels of Canadian beef; and excited considerable interest and curiosity. The attendance of town and country dealers at the sales, was numerous; and there were some gentlemen from Ireland —the latter, no doubt, chiefly to watch the progress of a trade threatening to interfere with that which they have enjoyed exclusively so long.

It must be observed, that the greater portion of the United States' meats were imported some months ago; and, having been cured before it was known that there would be a change in the British duties, were not so well suited to the taste of consumers here, as doubtless they will be rendered hereafter. The pork was generally very well fed, but rather fatter than the usual run of Irish. Of the beef, on the contrary, it was observed that it was not sufficiently well fed. We question whether the sales have resulted to the satisfaction of the importers generally. The buyers evidently acted with more wariness, from being new to the trade.

Of the United States' provisions, a large portion was withdrawn. The hams sold, fetched 30s. 6d. to 31s. per cwt., duty paid. Prime beef, 38s. to 39s. per barrel, duty paid. A very old parcel went even lower. Pork, 41s. to 46s. per barrel, duty paid. The Canadian pork realized 43s. to 46s. per barrel, duty paid. Of Canadian beef there was little offered, which realized, for prime, 46s. to 48s.; and one lot of prime mess, 50s. per barrel, duty paid. Several parcels of American cheese were offered, and sold at 36s. 6d. to 46s. 6d. per cwt., duty paid, for inferior to middling quality; whilst a few lots of "good," brought 50s. to 54s. per cwt., duty paid.

The New Tariff—Importation of Foreign Provisions.—A small quantity of foreign pickled beef and pork has this week been received here, (Berwick,) by Mr. James Sanderson, for the purpose of ascertaining its quality and the probability of its commanding a sale in this town, whose district is so justly celebrated for producing the excellent of both. The sample has been highly approved of—the pork in particular being of superior quality. The beef is from Holstein, in Denmark, and the pork from America. A supply has been ordered, which will probably be remitted here by the return of the steam packet Manchester, from London. The sample has been sold at — beef, 4½d. per pound; pork, 4d.—*Berwick Paper.*

Among the novel imports under the new tariff, an importation of 137 live geese from Norway, has been made at this port, during the present week. They were in tolerably good condition, and were readily disposed of at 3s. 6d. each.—*Newcastle Jour.*

Price of Butchers' Meat.—Beef from Hamburgh was exposed for sale in our market on Saturday. It was very fine, and attracted general attention. Choice cuts of foreign as well as of domestic beef, were 8d. per pound; or, with boiling pieces, 7d. So that, as far as fresh meat is concerned, prices have not, through the operation of the tariff, declined materially in the Liverpool market.—*Liverpool Albion.*

American Pork in Hertford.—We are informed that American pork of the first quality, is selling in this town at 4d. a pound—half the price of English, or something less.

The New Tariff.—Falmouth, Oct. 15.—Very prime corned pork and beef, imported from Hamburgh, has been in demand at 3½d. to 4½d. per lb. The Sarah landed to-day, direct from Corunna, 38 head of oxen. They are fine cattle, and will be sold by auction.

The beneficial effects of the new tariff have, we congratulate the public, reached Bedford, by affording to us excellent American salt beef at 4d per lb. —*Bedford Mercury.*

The Tariff Beef and Pork.—Since our last publication considerable excitement has been produced in the city, by importations of salted beef and pork, which have been retailed in various places at 4d. per lb. Messrs. Westlake & Co., Fore-street-hill, were the first to announce that they had a supply of "American pork and Hamburgh beef, at 4d. per lb.;" and on Saturday, particularly in the evening, after the artizans had received their wages, the shop was crowded with customers, to whom several hundreds of pounds weight of the imported meat were sold. During the week, the same kind of provisions has been on sale at Luckes', Fore-street; Butches', High-street; and Butchers', Blackroy-road; all of whom have made considerable sales. We have seen some of the beef and pork. Both were very good, and some of the latter was exceedingly fine. The beef is now selling at 3½d. per lb.—*Western Times.*

To Cook the Tariff Beef and Pork.—A correspondent, for whose letter we have not room, states that the best way to cook the recently imported beef and pork, is to soak it in cold water for from 12 to 24 hours—changing the water three or four times; and then to simmer it gently till done—taking care that the water does not boil. By these means it will eat very tender and juicy.—*Western Times.*

Foreign Meat, &c.—American pigs are fed by ranging in the woods and eating acorns; and, afterwards, with the best of all descriptions of food for fattening, Indian corn, frequently ground into meal. It is this description of food that causes the pork to be so fat as it is; and it is this that induces the fine flavor which is discoverable in no other pork. A few days since I heard the captain of a vessel say that American pork was too fat, and that it had a peculiar flavor. I, in consequence, obtained a piece of Canada pork out of a barrel belonging to a parcel which arrived in this port six weeks since. I had it boiled, and invited the captain and some others to examine the result. Without one exception, it was pronounced to be the sweetest, the best flavored pork they had ever tasted. Now as this description of pork has of late been selling in Liverpool, it could go into consumption at 3½d. per lb., and afford a fair rate of profit to the retailer; and, for ships' stores, it could be put on board for 27s. to 30s. per barrel, or about 2½d. per lb. So much for Sir R. Peel's new tariff, which, happily for the kingdom, will be the means of reducing the enormous price which butchers' meat had attained. We have latterly had incontestible evidence, through large importations, of the fine quality of American cheese and hams. In my house I have consumed a couple of the latter, for which I paid a retailer 6d. per lb. They are equal to Westphalia, for which I not long since paid 9d. These hams were cured in the Western States of America, and were sent down the Ohio to New Orleans, where they were shipped to Liverpool. Pickled hams have also been imported, of the finest description, which have been selling at about 35s. per cwt., duty paid, or 3d. per lb.; and after the 10th of October they doubtless will be sold to the small consumer at a low price. The Americans kill all their pigs and cattle during cold weather and the winter season, so that tainted meat is less likely from that than any other quarter. Hog's lard from the States, is likely to be imported in large quantities, the duty being reduced 75 per cent. In this country it is made use of for a variety of purposes, particularly as a substitute for butter, by confectioners; but I have never known it used here as a substitute for butter in the frying of fish. During a period of more than twenty years' residence in the United States, I never knew fish to be fried with any thing but hog's lard. This article will be sold, ere long, in the English market, for less than half the price of butter.—*Correspondent of the Liverpool Al.*

Longevity of the Horse.—There are, at this time, in the possession of a person residing not many miles from Northampton, five horses, namely, two mares and three geldings, of the respective ages of 38, 21, 20, 20, and 17, the united ages of which, therefore, are 116, and the average of ages upwards of 23. The oldest mare, that of 38, has been in the possession of the present owner and his family ever since the year 1813. She had two colt foals in the respective years of 1824 and 1825, so that she was twenty years old when she had her first foal. The youngest gelding is one of them. Two of the horses are worked regularly, the other three occasionally, and all are in the enjoyment of excellent health, being perfectly sound, wind, limb, and eyesight, except the youngest.—*Northampton Herald.*

To Subscribers, Readers and Correspondents.

We are compelled to throw ourselves upon the indulgence of our subscribers. The transfer of proprietors, the removal to a new office, the alteration of the form of the paper, and many hindrances incidental to such affairs, have delayed the issue of the January number and prevents our giving such plates as we design to furnish. We shall presently get all sails set, a full assorted cargo on board and a good crew; and promise ourselves and patrons a successful voyage.

We had prepared an article on the TIMES in conformity with the suggestion of our correspondent in Ohio, but it is necessarily postponed; as are likewise several communications on various subjects from various correspondents.

We respectfully ask of our old correspondents to continue their contributions; and of other friends to become contributors. We promise to receive them with grateful respect—a respect, we assure them, not the less sincere because we sometimes acknowledge them in our peculiar, which, after all, may not be the most civil, way. We have had various grave admonitory letters on this subject, in times past; but our organization is unfortunate and we fear irreparable; but our squibs are as harmless as any bunch of the smallest Chinese crackers, which never create any severe explosion unless they should chance to fall into an open keg of gun-powder: then look out! We have a much respected friend in Rensselaer county, who, because we happened, in our perversity and naughtiness, to draw a feather lightly across his upper lip, naturally rather stiff, blazed away at once like a handful of cotton touched by a friction match; but, upon sober second thought, he cooled off at once:—"Our good friend C." says he, "never means any harm; but this is his way, and what would be the use either to him or to me, of getting angry about nothing? It would do me no good, that is certain: it would do him as little, that is as certain." Was not this a wise and philosophic decision?

PROSPECTUS OF THE

NEW GENESEE FARMER,

AND GARDENER'S JOURNAL.

Vol. IV. for 1843.

HENRY COLMAN, Editor for the first quarter; and M. B. BATEHAM, for the remainder of the year.

Published by C. F. CROSMAN and E. SHEPARD, Rochester. Sixteen pages monthly, enlarged and improved; price $1 00 per year, in advance.

The character of the Genesee Farmer, both old and new, has been well known, and its ability and usefulness universally applauded. Published in one of the best farming districts in the world, and in one of the finest and busiest cities of the growing west, the very home of active industry and intelligence, where information and mechanical talent of the highest order are concentrated, no pains will be spared to make it all that such a paper should be.

Under present arrangements, Mr. Colman is expected to continue in the editorial department for the first third of the year; and whenever he retires from its supervision, it will pass into able and competent hands, who will do justice to the paper and its subscribers. Mr. Colman contemplates an agricultural tour in Europe, and will be a regular correspondent of the paper through the year.

Mr. Bateham, as travelling agent and correspondent, designs to spend most of his time among the farmers, observing their condition, and operations, and his contributions will be interesting and practical. The numerous and able correspondents of the N. G. Farmer, it is expected, will continue their valuable contributions. With these arrangements, the proprietors feel assured that the long-tried friends of the Genesee Farmer will not desert the paper; but will use their influence to extend its circulation and usefulness. If each subscriber would make it an object to procure one other, he would render an essential public benefit. The correspondence being extended throughout the country, the paper will embrace the husbandry of the whole of New England, the Canadas, the Middle, the Southern and Western States; and it will communicate the fullest intelligence of the progress of agriculture in the old world. Being connected with an extensive Agricultural Establishment, for seeds and implements, under the management of one of the Publishers, it will furnish information of all improvements in these departments. The proprietors will use their utmost endeavors to concentrate the best talent in their management; to have the mechanical execution and appearance greatly improved, and to render it entirely worthy of the patronage of practical and intelligent farmers.

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Editors who will give this prospectus one or more insertions, will be entitled to receive one volume of the paper without an exchange.

POSTMASTERS are permitted BY LAW to remit money free of postage. The friends of agriculture are respectfully requested to assist in obtaining subscribers. Back numbers or volumes can be furnished.

Communications on business or for the paper, may be addressed to Crosman & Shepard, Rochester. N. Y.

Meteorological Observations,

MADE AT THE ROCHESTER COLLEGIATE INSTITUTE BY L. WITHERELL, FROM NOVEMBER 27, TO DECEMBER 25, 1842.

DATE.	THERMOMETER. Sunrise.	1 o'clock, P. M.	1 h. af. sunset.	MEAN.	WINDS. A. M.	WINDS. P. M.	WEATHER. A. M.	WEATHER. P. M.	Rain Gage.
26	22	32	29	27,66	W	s W	cloudy,	cloudy,	
27	22	24	20	21,16	W	W	snow,	snow,	.30
28	17	32	21	2166	N W	N W	snow,	snow,	
29	15	25	15	18,16	N W	N W	fair,	fair,	.30
30	16	20	20	19,66	N	N E	snow,	snow,	
Dec. 1	24	29	27	27,	N W	N W	snow,	snow,	
2	26	34	30	32,	s W	s W	cloudy,	cloudy,	
3	38	40	36	36,83	W	W	cloudy,	cloudy,	
4	31	42	40	38,66	s W	W	cloudy,	cloudy,	
5	37	35	31	31,5	N E	E	snow,	snow,	
6	20	31	21	24,	W	s W	cloudy,	cloudy,	
7	20	35	25	27,	W	N W	cloudy,	cloudy,	
8	28	25	32	31,33	s	E	snow,	hl. & rn	
9	34	30	28	30,66	W	N W	snow,	cloudy,	
10	24	32	22	23,66	N W	N	snow,	cloudy,	1.30
11	24	25	28	27,66	W	W	cloudy,	cloudy,	
12	26	28	28	27,5	s	s	fair,	fair,	
13	32	36	22	32,83	E	E	snow,	snow,	
14	31	30	26	25,83	W	N W	snow,	snow,	
15	36	26	30	30,5	W	W	cloudy,	cloudy,	.63
16	25	30	24	24,66	W	W	cloudy,	cloudy,	
17	15	26	32	26,33	W	W	cloudy,	cloudy,	
18	30	20	19	21,66	N W	N	cloudy,	cloudy,	
19	32	36	33	29,16	W	W	cloudy,	cloudy,	
20	19	35	29	29,66	s W	s W	fair,	fair,	
21	28	39	34	33,33	s W	s W	cloudy,	cloudy,	
22	28	23	13	18,33	N W	N W	cloudy,	fair,	
23	10	16	16	15,26	N W	N W	cloudy,	cloudy,	
24	17	23	16	18,66	s	s	cloudy,	cloudy,	
25	17	30	30	27,83	s W	s W	cloudy,	cloudy,	

Range of Thermometer for the month, 32 degrees.

The fall of rain and melted snow for the month of November, 3,43 inches. Do. 1841, 2,85 inches. Do. 1840, 1,71 inches.

Mean temperature of November, 1842, 34,64 degrees.
" " 1841, 36,53 "
" " 1840, 37,52 "

REMARKS ON THE WEATHER FROM NOV. 26, TO DEC. 25.—The first half of November was very mild; the mean temperature being 41,44 degrees—the last was very cold, the mean temperature being 27,85 degrees. The temperature of the corresponding half of 1841 32,04 degrees. First half, 41,09 degrees. Nearly a week of sleighing in November this year.

DEC. 1.—Snow is a foot deep. There has fallen in all about 17 inch.
DEC. 3.—A large meteor seen this evening about 8 o'clock.
DEC. 8.—Snow, hail, and rain; 9 o'clock, colder with snow.
DEC. 13.—More snow; sleighing good.
DEC. 14.—More snow; the sleighing continues good to the present —December 25th.

PRODUCE AND CATTLE MARKETS.

ROCHESTER.

Scarcely any produce has been offered in market this week, ending January 10, owing to the sudden thaw, which has destroyed the sleighing and created a great freshet in the river.

Beef has improved a little. Good hind quarters fetch $2 50—fore quarters $1 75 and $2 00 per hundred pounds. Pork has lately advanced a trifle—first quality will bear quoting at $2 50 and $3 00. Butter about $9 00 per one hundred pounds—Lard and Cheese are dull at $5 00. But little doing in Wool, 30 and 35. Flour, wholesale, $3 38 and 3 44 per bbl. Wheat 75 cents; Oats 14; Barley 35; Corn 38; Slaughter Hides 4; Dry 6; Calf skins 30; Sheep skins, each, 25 and 40. Salt, 1 00 per bbl.; Eggs 13 and 15 per dozen; beans 75 per bushel; Potatoes 15 and 18; Hams 18 and 25; Peas 43; Wood 2 00 per cord; Clover Seed 6 00 per bushel; Hay 6 00 per ton.

Whole amount of Cattle and Stock sold at Brighton Market, Mass., for 1842.

32,070	Beef Cattle.	Sales estimated at	$1,246,940
17,126	Stores,	" "	256,890
106,655	Sheep,	" "	127,986
39,935	Swine,	" "	109,924
			$1,741,740

1841.

36,607 Beef Cattle, 18,794 Stores, 128,650 Sheep, 31,872 Swine,	Sales estimated at	$2,400,881

1840.

34,160 Beef Cattle, 12,736 Stores, 124,172 Sheep, 32,350 Swine,	Sales estimated at	$1,990,577

1839.

22,263 Beef Cattle, 15,252 Stores, 95,400 Sheep, 26,088 Swine,	Sales estimated at	$1,901,864

1838.

25,830 Beef Cattle, 9,573 Stores, 104,640 Sheep, 26,104 Swine,	Sales estimated at	$2,058,004

Miscellaneous Notices of Markets.

THE PORK MARKET.—Pork is coming in very freely. The following are the prices paid in trade, no cash being offered that we are aware of.

Hogs from 100 to 150 lbs.	$1 00 per cwt.
" from 150 to 185	1 25
" from 175 to 200 and over,	1 50

These are certainly low prices, but they are as high as buyers are warranted in giving. We believe that not a single barrel of pork sent from here last spring netted cost to the owners.—*Peoria Register, December 23.*

NEW YORK CATTLE MARKET.—At market 725 head of fresh cattle, and 800 sheep and lambs.

Prices—Beef Cattle—Owing to the holydays the market has not showed the usual activity, but prices are fully maintained, and may be quoted at $3 50 and 5 00 to $6 00 for first quality.

Sheep and Lambs—Sales of 550 at $1 50 and $4 00 for sheep, and $1 25 and $2 12½ for lambs.

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PURE CLOVER AND TIMOTHY SEED

WANTED.—A few hundred bushels of the first quality at the Rochester Seed Store. C. F. CROSMAN.

PITTS' GRAIN SEPARATOR.

THE subscriber hereby gives notice that he has left Albany and located in the city of Rochester, N. Y., where he will furnish his Machine, (Pitts' Separator,) to purchasers, in its most improved form. It will be furnished in combination with the Thrasher, or, if desired, in such form that it can be attached to the common thrashing machine. JOHN A. PITTS.

Rochester, January, '43.

VALUABLE REAL ESTATE FOR SALE.

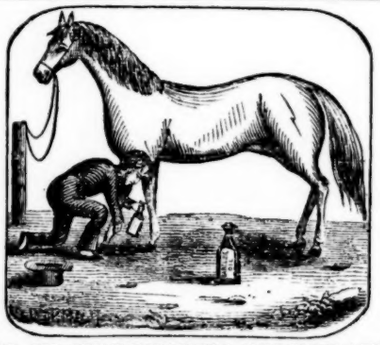
THE subscriber offers for sale his real estate on North-Street, consisting of four acres of land, divided into TWENTY THREE BUILDING LOTS, worth from one to four hundred dollars each. Also a House and Lot on the same plot, worth six hundred dollars, with a first rate cellar, and a well of excellent water, and every way convenient for a small family. If not sold before spring, the house will be rented, in connexion with land enough for a Vegetable Garden for marketing purposes. Terms will be made easy to purchasers, and title indisputable. ERASTUS SHEPARD.

Rochester, January, '43.

ROCHESTER SEED STORE AND SEED GARDEN.

NEW ARRANGEMENT.—C. F. CROSMAN having purchased the entire business and effects of the Rochester Seed Store, desires to inform the Agents and Customers, and all who may wish to patronize the establishment, that he is now bringing in from his large Seed Garden on Monroe Street, a complete assortment of such seeds as are best raised in this climate, and he will import from the first seedsmen of Europe and elsewhere, such kinds as are better raised in other climates. Any seeds of doubtful vitality will be thoroughly tested by sowing, and none offered for sale but such as can be warranted genuine. The proprietor is fully confident that his long experience in the business of growing and vending Seeds, will enable him, with strict attention, to conduct the business in a manner that will prove satisfactory to the public. C. F. CROSMAN.

Rochester, October 1, 1842.



GEO. W. MERCHANT'S CELEBRATED GARGLING OIL,

FOR removing the following diseases from horses, &c.—*Fresh Wounds, Spavins, Sweeney, Galls of all kinds, Fistula, Sitfast, Sprains, Bruises, Strains, Lameness, Cracked Heels, Sand Cracks, Ring Bone, Foundered Feet, Poll Evil, Scratches or Grease, Windgalls, Horn Distemper, &c.*

This Oil is prepared from the choicest selected materials, only at the Labratory of the Proprietor, Lockport, N. Y. For testimonials, synopsis of diseases, and mode of treatment, see pamphlet, which accompanies each bottle.

For sale at the Rochester Seed Store, and by most of the respectable Druggists in the States.

Rochester, January 11, 1843.

FROM THE POWER PRESS OF ERASTUS SHEPARD,

No. 20, State Street, Rochester, sign of the Daily Evening Post.

☞ All kinds of Book and Job Printing done promptly.